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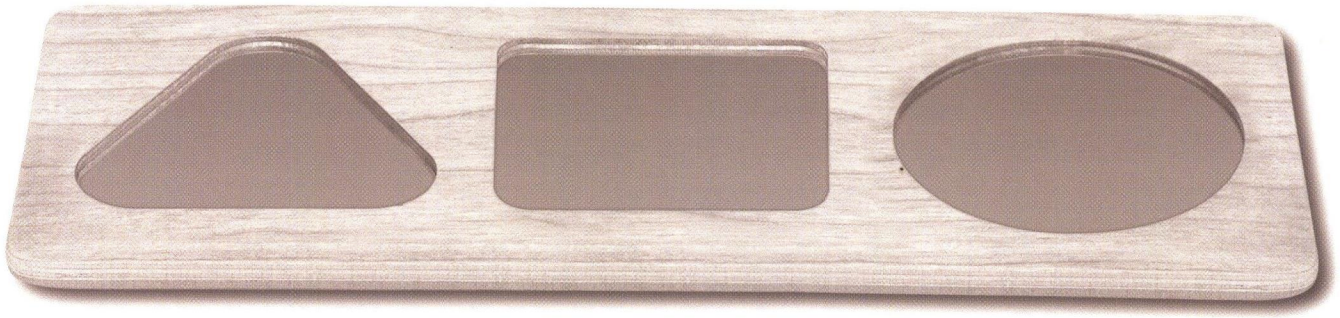

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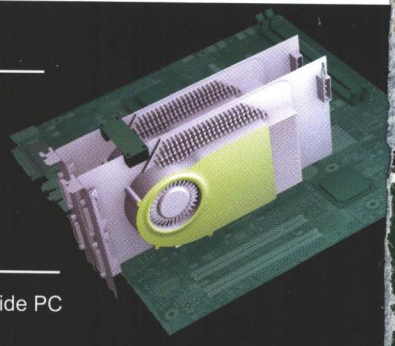

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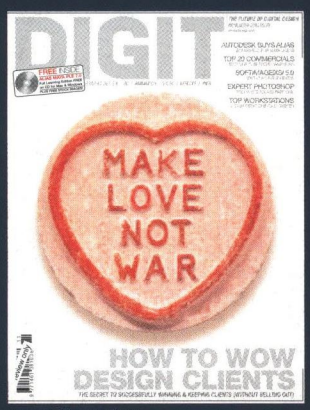
MEET THEM AND BEAT THEM

contents november

ISSUE 93



cover illustration
From David Newton, *www.debutart.com*

reviews

80	Softimage|XSI 5.0
83	Sony HDR-HC1
84	RealViz Stitcher 5
87	@Last SketchUp 5
88	Alias MotionBuilder 7
91	Markzware FlightCheck Studio
92	DxO Labs DxOptics Pro 3
94	AJP D900T-U
94	Pioneer DVR-110D

news

8 **Alias snapped by the 3D rival:** Autodesk grabs Maya and Studio Tools, with reaction from Luxology and Daz

10 **Lost finds VFX Emmy award:** Digital Dimension's plane crash helps the US drama to four Creative Awards

11 **Ad agencies aim at gaming:** gearing up to push ad campaigns into games and interactive titles

12 **UMD cash cow for DVD companies:** how the PSP's new disc format is offering opportunities for disc design

16 **Olympus adds 8mp E-System:** launches E-500 digital SLR with large-pixel CCD, plus five lenses

17 **Carrara 5 updates modelling tools:** borrows tools from Hexagon, plus boosts rendering with new tech

18 **Canon launches XL H1 HDV camcorder:** takes the XL1 into the HD age, while keeping component design

20 **Camera to focus on bigger screens:** sleek Sony and Olympus models add three-inch LCD screens

22 **Stock:** feast your eyes on the latest stock image collections and fonts to aid your creative work

26 **Pulse:** quirky gadgets, essential exhibitions, and cool toys to while away your down time

features

34 CUDDLING UP TO CLIENTS
How to manage expectations and deal with those who pay your bills without losing your soul – or their custom

40 TOP 20 TV ADVERTS
Check out our list of the best commercials from the world's first in 1941 to 2004's multi-award winning *Grrr* campaign for Honda

46 GEEK BOY TAKES ON SCI FI
Onedotzero partners with unit9 and director Jake to create four film-parodying stings for The Sci Fi Channel

48 MPC GO TROLLING FOR MAYNARDS
Not gruff about creating CG troll for Wine Gums campaign

50 POLANSKI WITH A TWIST
MotionFX keeps its work out of sight for *Oliver Twist*

52 HIDING THE PRESENT
Double Negative remove signs of modern England to take Keira Knightly back to Georgian England for *Pride & Prejudice*

55 GROUTEK EXPLORES FRONTAGE
The French agency's surreal Web site for the Japanese branders

59 DEPECHE MODE GETS ON BOARD
Uwe Flade's dreamy, ship-set video for the single, *Precious*

61 INSIGHT: NOWWASHYOURHANDS
How being driven got the full-service agency a raft of clients from the MTV European Music Awards to Victor Chandler

64 INTERVIEW: TIM BEVAN
Working Title's co-founder on how to make money from Brit-flicks

96 MASTERCLASS: NATURAL EFFECTS
Fake real-world effects including lightning and rain in Photoshop

102 THE WORLD SERIES
Be on top of the world, ma, with our comprehensive guide to the top landscape generation software tools

108 GRAPHICS WORKSTATIONS
Whether you're a graphic designer, an illustrator or a video editor, find the perfect desktop for you here

regulars

29 **Matthew Bath:** will the meeting of Maya and 3DS Max be good for 3D?

30 **Letters:** speak, attack, defend, and rant – creative communication ahead

32 **Inspire:** get down to some serious wrist action with top designs from Swatch

66 **Design classic:** VW's defining 1960 newspaper advertising campaign

68 **Subscriptions:** Digit delivered to your doorstep every month.

70 **Showcase:** the cream of your creative work as readers show off

114 **Competition:** win a dedicated server from Amenworld for 12 months

115 **Buyers Guide:** the industry's biggest guide to creative products

127 **Next month:** find out what's in store in Digit 94 – out November 17

128 **CD pages:** complete guide to this month's showcases and software

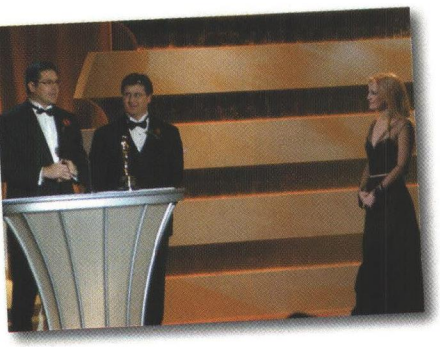
STAR WARS EPISODE III IMAGES © 2005 INDUSTRIAL LIGHT & MAGIC

OUR INITIAL REACTION WAS SIMPLE: WE REALLY DIDN'T WANT TO DO THIS...

DOUG WALKER
CEO & PRESIDENT
ALIAS

ALIAS SNAPPED UP BY 3D RIVAL

AUTODESK'S SHOCK SWOOP ON MAYA MAKER



Defining moment
3D software pioneer Alias|Wavefront was presented an Oscar statuette by Academy Award-nominated actress Kate Hudson at the Scientific and Technical Achievement Awards in 2003. A mere two years later, and the company is snapped up by Autodesk.

The professional 3D and film industries are reeling from the news announced in early October that Autodesk has launched a bid to buy up Alias, maker of rival 3D application Maya, for a cash offer of $182 million. The move, which is scheduled to be completed within the next four-to-six months, will see Maya integrated into the Autodesk range of entertainment tools that include 3DS Max, Flame and Combustion. Previously, both Max and Maya users had been in opposing camps – and Maya users reacted to the news with alarm, concerned that the high-end tool will be phased out in the move.

Is this the end of Maya?

Not so, says Alias president and CEO, Doug Walker: "The acquisition is designed to leverage the strengths of both companies, and Alias' customers will benefit from nearly $300 million in R&D spending while having access to new and complementary products and technologies. Together, Autodesk and Alias will deliver products and services that give form to great ideas from film to the factory floor."

Founded as Alias Research in 1983, and based in Toronto, Alias counts some of the world's largest companies as its customer base, including Industrial Light & Magic, Dreamworks SKG, Nintendo, General Motors, and BMW. Its revenue was $83 million in the fiscal year ended June 30.

However, the move did come out of the blue, admits Walker: "Autodesk approached us in May or June of this year, and they were looking to expand their strategy and they have an acquisition strategy. Our initial reaction was simple: we really didn't want to do this," he said in an interview with Digit.

Yet Walker says that initial reluctance gave way to interest as Alias' board of directors digested the offer.

Future integration

"We found there was a tremendous amount of complementary value between the two companies, and as the talks progressed, we got more excited about tools and technology, both in terms of the future of Maya and the possibility of integrated visualization tools from both companies."

TIMELINE

1983
Alias is able to obtain a $61,000 grant from the NRC, which allows work to begin on the development of the first code.

1984
The name Alias is suggested by co-founder Steve Bingham while in a restaurant on a visit to SIGGRAPH. It sticks.

1989
Alias 2.4.2 is used to create the pseudopod creature in the movie *The Abyss*. It gets an Oscar and Alias its first industry recognition.

1990
Alias goes public, raising around $35 million, and debuts its third generation of its Studio industrial design software.

1993
Alias starts working on a new entertainment software, which will later become known as Maya, and develops StudioPaint.

1995
Alias|Wavefront is formed on Febuary 7. *Toy Story*, *Golden Eye*, *Casper* and *Pochontas* movies are released that use Alias tools.

1998
The long-heralded launch of Maya, with the likes of Square and Cinesite among the ranks of beta users hailing the release.

Autodesk has moved quickly to dispel concerns that Maya will be scrapped as part of the deal.

No change of direction

"We do not anticipate any changes with respect to planned product releases for both companies," says the company. "3DS Max and Maya software products differ greatly in supported platforms. Maya software supports Linux, Windows and Mac operating systems, making it the top choice for platform-sensitive segments like high-end film, whereas 3DS Max is a Windows application that is used most often in world-building for games."

However, Autodesk admits that the move will eventually see the Alias brand disappear and replaced by the Autodesk livery on former Alias products.

It may be Alias' dominance of the film industry – and the failure of 3DS Max to break into that market, that prompted the move.

Integrated markets

"Alias will complement and expand Autodesk's offering to the film and video, games, Web, interactive media, consumer products, industrial design, automotive, architecture, and visualization markets. Alias' products for the film industry provide customers with an additional tool for pre-visualization, or modelling, animating and lighting realistic CG creatures," says Autodesk.

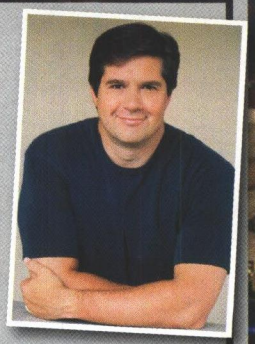
1999
Maya splits into two products – Complete and Unlimited – and rewrites the pricing within the 3D software market.

2000
Maya for Mac OS X is announced to the Mac faithful, while Square releases the CG-only movie *Final Fantasy*, which used Maya.

2003
Alias becomes the first 3D software company to win an Oscar, which it scores for Maya. Maya 5 is announced at NAB.

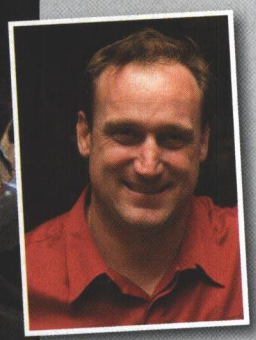
2005
Autodesk, owner of Discreet's 3D tools, announces plans to purchase Alias. The deal should be sealed by 2006...

COMMENTARY



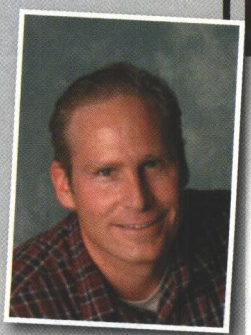
Doug Walker
CEO and president
Alias

"The main message on this to Alias users is that it's business as usual – Autodesk will continue to support both Maya and 3DS Max, with the same level of investment and the same commitment to marketing. Both companies have a suite of products, and both are doing well in the market, so there is little reason to meddle with them. Instead, this is building bridges. Most employees will be making the move to Autodesk – this is not about cost-cutting and efficiency. In terms of our customers, the general feeling is that they understand, and it makes sense. Sure, they have questions, but overall they think it makes sense and we're communicating with them. This will end up being the best thing ever for them."



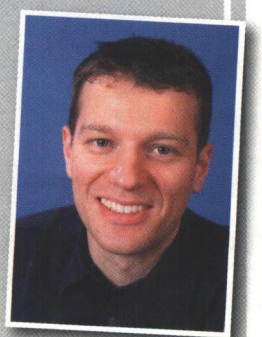
Brad Peebler
President and co-founder
Luxology

"What? How much? No way. That makes no sense. Cash?!!? Whoa! I really didn't understand the news as it seemed to create more challenges than opportunities for Autodesk. However, once I stopped trying to understand it from a Max/Maya perspective it made a lot of sense. Autodesk could leverage Alias' design tools as well as the work they have done in servicing the automotive industry to extend the CAD pipeline with this technology. Moving their billion dollar CAD market forward even a few points with Alias technology means big returns. This isn't about Max/Maya, this is about CAD."



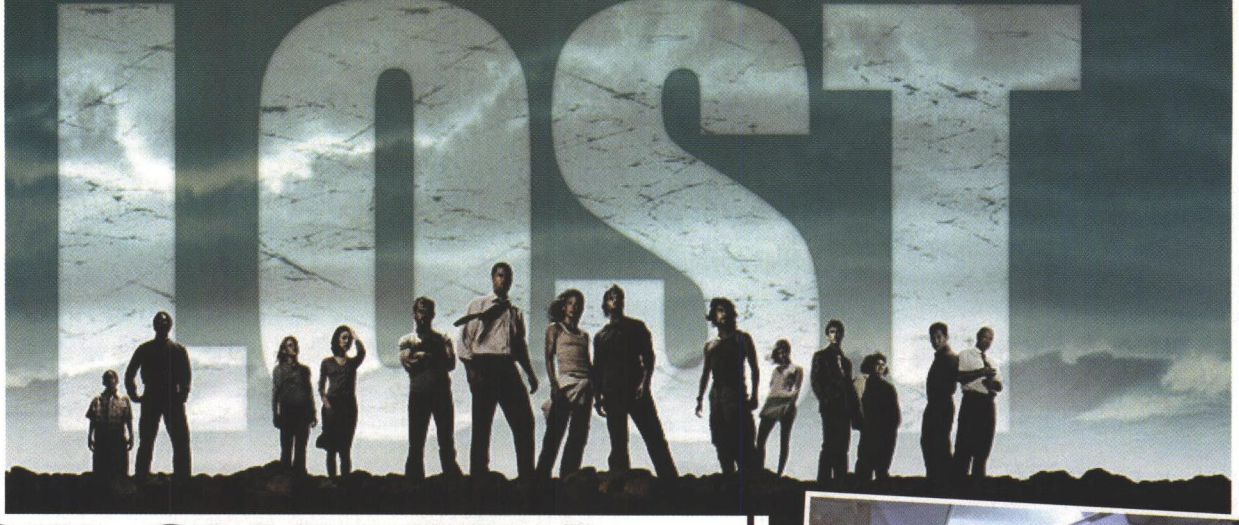
Dan Farr
President
DAZ Productions

"I'm excited to see some consolidation taking place to help further validate the 3D industry. I think that there is a lot of potential in the 3D industry but I feel it needs to mature and consolidate a bit more. I would be surprised if we don't see a lot more of this type of thing happening in the next couple of years. My advice to Maya users would be to have a wait-&-see attitude. There is also a possibility that prices may drop over time as a result."



Patrick Jocelyn
Director – EMEA
Autodesk Media & Entertainment

"We appreciate that customers have chosen either Maya or 3DS Max because of how suited they are at addressing particular needs. We plan to continue offering this same focus on product choice to address particular customer needs. Both companies' original product schedules are still intact, and product teams will be kept intact to help provide continuity in the releases of products after the acquisition has closed."



LOST SWEEPS EMMY AWARDS

OUTSTANDING SPECIAL VFX GONG FOR SERIES

Conspiracy-driven American drama *Lost* has picked up the award for Outstanding Special Visual Effects For A Series at the Creative Arts Primetime Emmys, presented by Academy of Television Arts and Sciences in LA. Ironically for a series that begins with a plane crash, the episode that was awarded the 'TV Oscar' was the pilot.

The 50-second photo-realistic sequence shows a plane coming apart, seen from inside the cabin. The effects were created by Digital Dimension for the pilot, but are seen in flashback in almost every episode.

From an original plate of five rows of jostled passengers – shot against greenscreen – the company built debris, chairs and the tail extension of the plane in Autodesk's 3DS Max, and the composited them together in Eyeon's Digital Fusion. A breakdown of the shots can be seen on the Digital Dimension Web site.

Lost also picked up Creative Emmys for editing, music compositing, and casting. This was on top of the two it picked up at the main Primetime Emmys, including one as best drama series of the year.

The Special Visual Effects award for miniseries, TV movies or specials went to the BBC and HBO's collaboration, *The Life and Death of Peter Sellers*. The effects for the TV movie, which starred Geoffrey Rush and Charlize Theron, were completed by The Post Group. It also picked up awards for cinematography, editing, sound editing, prosthetic make-up, and hair – plus directing, acting (for Geoffrey Rush), and writing.

The Animated Program award for pieces an hour or longer went to the Cartoon Network for *Star Wars: Clone Wars*. The short form award went to Comedy Central for *South Park*.

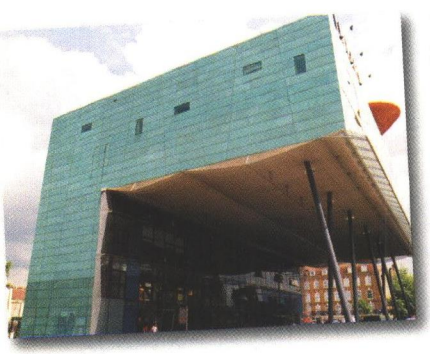
Individual Achievement awards were presented to eight people who were judged to excelled in the past year. These included animator Barbara Wierzchowska for HBO's *Classical Baby*, character designer Gordon Hammond for *The Fairly Odd Parents*, storyboard artist Bryan Andrews for Samurai Jack, and background key designers Frederick Gardner and Justin Thompson for *The Powerpuff Girls* and *Star Wars: Clone Wars*, respectively.

Individual awards were also given to three creatives who worked on *Foster's Home For Imaginary Friends*: art director Mike Moon, character designer Craig McCracken, and storyboard artist Ed Baker.

Separately, at the News and Documentary Emmy Awards, UK post-production house MPC picked up an award for graphic and artistic design for its work on the Virtual History show *The Secret Plot To Kill Hitler*, for Discovery. Full details of the awards can be found at the Emmy Web site.

Academy of Television Arts and Sciences, www.emmys.com
Digital Dimension, www.digitaldimension.com
MPC, www.moving-picture.com

PECKHAM NAMED BEST PLACE FOR CREATIVE PROFESSIONALS



Forget Soho and Shoreditch – the hottest place for creative professionals has been revealed in a new book called *Creative World*, with Peckham named as the surprise 'creative hotspot'.

"We looked for locations that had an organized creative class, a social and cultural mix, and good communications coverage," said Dan Holliday, of The Fish Can Sing agency which is publishing the book. "Some are already associated with specific industries or crafts, but we looked at those that would attract creative people and stimulate them once there." Peckham includes public art by Zandra Rhodes and Tom Phillips, and *Angel of the North* sculptor Antony Gromley is a resident.

CHANNEL FOUR SEEDS VIRAL CAMPAIGN SITE

Channel 4 has launched a viral contest Germ, aimed at UK agencies and held to honour the best in viral advertising. Working with digital agency DS.Emotion and viral promoter Hot Cherry, the contest aims to find the ultimate viral ad in 2005 produced by a UK creative agency.

The free-to-enter contest is open for entries until the start of December, with the public able to vote for the best viral campaign via the Channel 4 Web site.

The winning entry will get an audience of millions, say organizers, and will feature free seeding on Bore Me's home page for two weeks, worth £5,000. Judges will be made up of experts from the UK creative industries.

Germ, www.channel4.com/germ

AD AGENCIES AIM AT GAMING

UK AGENCIES: 'GAMES ARE THE FUTURE MEDIA'

British advertising agencies are lining up to play the latest computer games – and it isn't simply for an extended Deathmatch session. Agencies such as Manning Gottleib OMD in London and Razorfish are gearing up to creative ad campaigns that are aimed at upcoming interactive entertainment titles.

"Gaming is becoming an increasingly important component for many of our clients' digital advertising efforts and, over the past year, has established itself as a key advertising vehicle for many mainstream marketers," said Shanthi Sitterud, director of media for Avenue A | Razorfish.

Agencies have been tapping into the likes of IGA Partners – a media group dedicated to in-game ads – and discovering the demographics of gamers, the power of different platforms, and how to run in-game advertising campaigns.

GAMING IS INCREASINGLY IMPORTANT FOR CLIENT'S DIGITAL ADVERTISING...

SHANTHI SITTERUD

"Manning Gottlieb OMD is excited to be working... to create new opportunities in the potentially massive gaming medium," said Jean-Paul Edwards, head of media futures at Manning Gottlieb in London. "The solutions we are designing look very different from the solutions of the past – new levels of rich content and accountability are really starting to open this new frontier."

The move comes just as a report by research firm PriceWaterhouseCoopers reveals that video games are set to be the fastest-growing media sector in the world over the next five years. The report reckons that the world's media and entertainment industries will grow faster in the second half of the decade that the first, with total annual sales forcast at £1 trillion by 2009.

Gaming will spearhead the advance, according to the report, with next-gen consoles, increased online gaming, and better wireless access accounting for double-digit growth year-on-year. The overall worth of the video-games industry is pegged at $55 billion worldwide by 2009 – up from a reported $25 billion in 2004.

IGA Partners, www.ingameadvertising.com

ATOMFILMS AND INTEL CONTEST

AtomFilms and Intel have launched the Intel Indies Film Contest with a call for short film entries available at http://intel.atomfilms.com. Filmmakers who enter before the November 21, 2005 deadline will compete for a grand prize that includes worldwide distribution from AtomFilms, $25,000 in cash and $20,000 in digital home equipment from Intel. Winners will be announced at a major film festival in January 2006.

The contest asks entrants to create films that imagine what they would do with a magic wand. The theme allows entrants to fully unleash their imagination and tell the story of how they would transform their world.

Entries will be judged by a panel of industry experts, AtomFilms staff and Intel staff. Entries can be live or animated, and no longer than four minutes in length.

Microsoft, Intel back HD-DVD

Microsoft and Intel have decided to back HD-DVD, the next-generation DVD format being developed by the DVD Forum. Microsoft and Intel announced their support for HD-DVD by joining the HD-DVD Promotion Group, an industry organization set up to promote adoption of the optical disc format. Other members of the group include electronics makers such as NEC, Sanyo and Toshiba.

Microsoft's decision to back HD-DVD is a change for the company, which had previously said it wanted to remain neutral in the battle between the dueling HD-DVD and Blu-ray Disc optical disc formats.

"Although the companies have determined that HD-DVD is the only viable solution at this time, each remains committed to working toward one format that meets consumer and industry requirements," Microsoft and Intel said in a statement.

UMD DISCS ARE A CREATIVE HIT

THE PAVEMENT TALKS ABOUT 'MINI REVOLUTION'

UMD DESIGN IS VERY SIMILAR TO FLASH ANIMATION
SEBASTIAN HAGEMEISTER

A quiet revolution has taken place in interactive media, according to UK DVD production company The Pavement, which has created a series of UMD video discs for Sony's PSP gaming platform. The UMD format, which carries games, audio, and video, has proven a hit in the UK since Sony launched it on September 1, shifting 100,000 units in four weeks – around one per cent of all movie sales.

The Pavement, which has created the first UK-centric discs, including *The League of Gentlemen's Apocalypse*, *A Bear's Tail*, and a Scissor Sisters music video, reckons the format is set to offer interactive studios a new, creative outlet.

"UMD should be a hugely successful format truly exploiting the real potential of portable entertainment, with special features enabling it to download content," reckons The Pavement's sales and marketing director Kristen O'Sullivan.

The Pavement says that UMD offers a level of interactivity beyond DVD, and is on a par with the upcoming HD-DVD format.

"UMD interactive design is very similar to Flash animation," explains Sebastian Hagemeister, lead author at The Pavement. "The designer no longer has to rely on pre-rendered animation and stills. You can now use several layers of elements (called 'widgets') and animate them seamlessly as the user navigates through the menus, allowing faster and smoother animation. In addition, you can crop, move, and scale the background video and use animated PNG sequences to add further interactivity."

The move to add UMD to its portfolio hasn't been without its challenges, admits Hagemeister.

"Like with MPEG-2 encoding at the beginning of DVD production, encoding for UMD has been quite a challenge. It uses h264 compression with a Sony propriety profile – on a PC, this takes around 24 hours to encode an hour of footage. But, we managed to reduce this to around two hours. Also, unlike DVD, there is no GUI for UMD authoring – all the code is written manually in a text editor."

The future of the format is exciting, reckons O'Sullivan: "We are confident that UMDs will appeal to a wider demographic, such as women – I'd personally love to use PSPs/UMDs for travel rather than carry around heavy guide books."

Sales projections are certainly robust for UMD videos – with industry predictions looking at them growing from three million units in 2005 to 28 million annual sales in 2007.

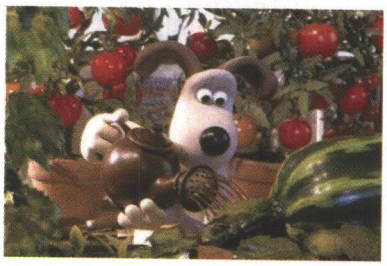
The Pavement, www.the-pavement.com

Some of The Pavement's UMD titles include *A Bear's Tail* and a Scissor Sisters music video.

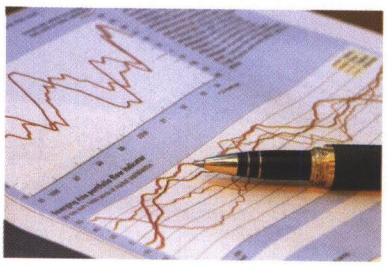
Raptor mouse changes res

Raptor has released the Raptor Gaming M2 mouse, which offers a level of precision aimed at creatives. The resolution of the mouse can be set using a hardware to button to between 400dpi and 2,400dpi. It's ergonomically shaped for right-handed users and features eight buttons. It costs £25.49 plus VAT.

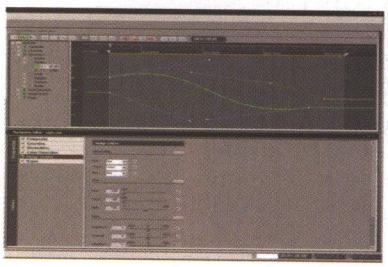
industry news Business bits from around the world



DISASTER HAS BEFALLEN **animation studio Aardman Animations, which has suffered a devastating blaze at its storage warehouse, wiping out 30-years of props, models, and storyboards. The complete set of *Chicken Run*; the Plasticine models of the animals in *Creature Comforts*, and Shaun the Sheep from *A Close Shave*, were all lost. Aardman's Nick Park remained upbeat, saying in light of other tragedies, the loss was "no big deal".**

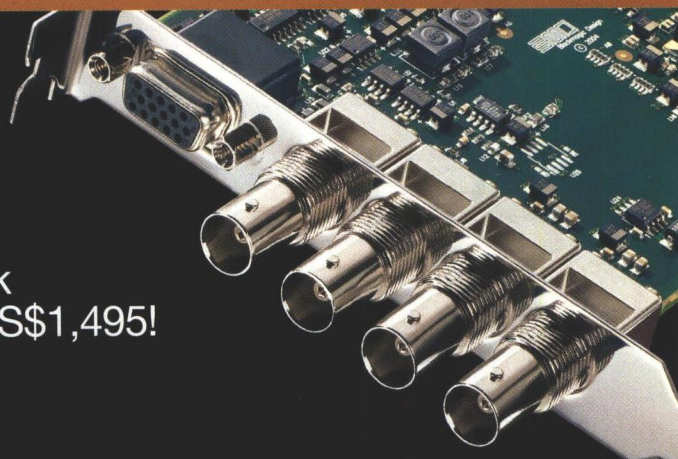


ADOBE **reported its third quarter net profit rose 39 per cent from a year ago. The software maker reported net profit of $144.9 million in the three months ending September 2, up from $104.5 million during the same time last year. Revenue rose 21 per cent to $487 million, the company said. In the fourth quarter, Adobe expects revenue of between $490 million and $510 million, and a gross margin of approximately 94 per cent.**



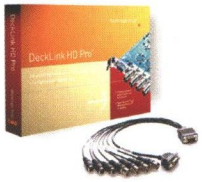
OPTIBASE HAS **announced that it has entered a definitive agreement with effects software maker Boris FX to sell its non-linear editing product line, Media 100. The news comes less than a year and a half ago since Optibase acquired Media 100, including its 844/X high-end finishing system. Optibase CEO Uzi Breier said that the deal with Boris FX will allow his company to focus its efforts on the IPTV market.**

Blackmagic Design **DeckLink**™



Introducing DeckLink HD Pro

The world's highest quality HDTV Dual Link 4:4:4 and NTSC/PAL video card for only US$1,495!



New Adobe OPEN HD certification
NEW uncompressed Real Time effects
NEW compressed DV Real Time effects
New DPX file support with Blackmagic FrameLink

DeckLink HD Pro Features: HDTV and standard definition support in 4:2:2 or Dual Link 4:4:4 • All HDTV formats including 1080/24psf, 23.98psf, 50i, 59.94i, 60i, 720/59.94p, 50p, 60p • Standard definition SDI format support for NTSC and PAL • Precision 14 bit analog component monitoring output • Switches between HD or SD • True 10 bit RGB 4:4:4 or YUV 4:2:2 HDTV capture • Instantly switch between HD-SDI and NTSC/PAL • Dual HD-SDI inputs and outputs for Dual Link 4:4:4 • AES-S/PDIF output, AES-S/PDIF input and AES word-clock output • Sony™ compatible RS-422 serial deck control port included • Black burst & HD Tri-Sync compatible genlock input • HD to SD hardware downconversion.

Dual platform compatibility.
Includes drivers for Microsoft Windows XP™ and Premiere Pro 1.5™ and Sony Vegas 6™, and on Mac OS X™, QuickTime™ and Final Cut Pro 5™.

Support for all leading broadcast applications. Apple Final Cut Pro 5™ • Adobe Premiere Pro 1.5™ • Sony Vegas 6™ • Adobe After Effects™ • DVD Studio Pro • Discreet Combustion™ • iDVD™ • Discreet Cleaner™ • Color Finesse™ • Microcosm™ • Apple Shake™ • Motion™. And most other QuickTime™ and DirectShow™ based applications.

Blackmagic Design's industry leading range of 10/12 bit Dual Link 4:4:4 products for HD and SD

DeckLink HD Pro

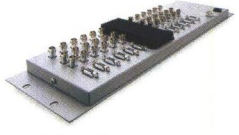
Introducing the world's highest quality video card with amazing Dual Link HDTV 4:4:4 SDI for 10/12 bit RGB workflow. DeckLink HD Pro instantly switches between HD and standard definition. Now you can afford the best quality HDTV card available, even if most of your work is in standard definition. DeckLink HD Pro does both!

DeckLink HD Pro features an unprecedented 14 bit 4:4:4 analog monitoring output, retaining the subtle detail of film originated video. Combined with high speed converters adds up to the world's best HDTV monitoring. Monitoring instantly switches between HD and SD. Great features like AES-S/PDIF audio, and black burst & HD Tri-Sync input helped DeckLink HD Pro win 4 leading industry awards.

New Single Link 4:2:2 model of DeckLink HD Pro available! Only RRP US$995

Workgroup Videohub

Workgroup Videohub eliminates manual cable patching by connecting everyone together into a fully featured professional routing switcher. Also includes independent monitoring outputs so you can instantly see any deck or editing system in your facility. Workgroup Videohub has 12 fully independent dual rate SDI inputs and 24 independent SDI outputs that auto switch between HD-SDI and Standard Definition SDI.



RRP US$4,995

HDLink

HDLink connects SDI video to any supported DVI-D based LCD computer monitor for true HDTV resolution video monitoring. Featuring Dual Link 4:4:4 HD-SDI, 4:2:2 SD-SDI and a fast USB 2.0 input with de-embedded analog RCA audio outputs. Because every single pixel in the SDI video standard is mapped digitally onto the pixels of a 1920 x 1200 resolution LCD display, you get a perfect digital pixel for pixel HDTV image quality. Now features SD anamorphic mode for 16:9 display and HDMI video support.

RRP US$695

DeckLink HD

This world leading 10 bit HDTV SDI card has changed the broadcast industry. It instantly switches between HDTV or NTSC/PAL SD eliminating your upgrade risk to HDTV.

RRP US$595

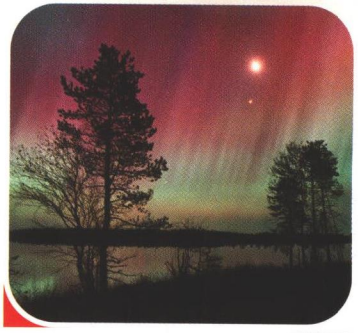
DeckLink Extreme

This amazing video card features 10 and 8 bit SD-SDI, HD-SDI down conversion, analog composite and component I/O, balanced analog audio I/O, DV, JPEG, internal keyer, genlock and so much more. Now available with PCI-Ecpress.

RRP US$895

Blackmagicdesign

Visit our website **www.blackmagic-design.com** or call your local DeckLink dealer for more information



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november

monday	tuesday	wednesday	thursday	friday	saturday	sunday
	01	02 **BITFILM FESTIVAL** Hamburg's digital film festival includes 3D animations, machima, films made in Flash and for mobile phones, and shorts for train screens *www.bitfilm-festival.org*	03 **LONDON FILM FESTIVAL** The festival closes with George Clooney's award-winning story of 50s politics, *Good Night, and Good Luck* *www.lff.org.uk*	04 **MARK PORTER** Redesigning *The Guardian* newspaper *www.designmuseum.org* **BROTHERS GRIMM** Terry Gilliam's effects laden fairytale *On general release*	05	06
07	08	09	10 **DESIGNEDGE 2005** The worldwide design conference, hosted in Singapore and online *www.designedge.sg*	11	12	13
14	15	16 **BRADFORD ANIMATION FESTIVAL 2005** An eclectic mix of masterclasses, workshops, exclusive screenings and special events led by some of the animation industry's top names – plus the BAF Awards 2005 *www.baf.org.uk*	17 **DIGIT 94 ON SALE NOW!** Get a subscription to go on page 68	18 **HARRY POTTER AND THE GOBLET OF FIRE** *On general release*	19	20 **TRUEPLAYERZ** Take part in Joystick Junkies' games tournament for a charity of your choice, or just watch the games and live bands and DJs *www.joystickjunkies.com*
21 **TOM DIXON** One of the UK's most influential product designers discusses his work and Finnish furniture makers Artek. *www.designmuseum.org*	22	23	24	25	26	27
28	29 **TIM BEVAN** The President's Lectures continues with the co-founder of Working Title, interviewed on page 64 *www.dandad.org*	30 **BIFA AWARDS** The British Independant Film Association's annual awards, celebrating the best film-making from around the UK *www.bifa.org.uk*				

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NEW!! LaCie Safe Mobile Hard Drives

- Biometric encryption - Fingerprint recognition
- Safely store and transport your private data
- Ultra-portable - only 8 x13.8 x2.5cm & 200g
- USB 2.0 interface - all cables included
- AC adapter-free, powered by USB
- Sleek, robust encloser - designed by F.A. Porsche
- 2 years manufacturer's warranty as standard

Available Models :
40GB, 80GB, 120GB

NEW! LaCie Triple Interface FireWire 800/400 & USB2.0 d2 Hard Drives

- Sleek, aluminium heat dissipating robust case
- 7200rpm ideal for DV Video - silent operation
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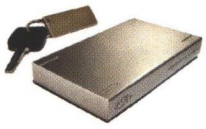
- Compatible with Windows® backup utility
- 2 years manufacturer's warranty as standard

Available Models :
160GB, 250GB, 300GB, 500GB, 600GB, 1000GB, 1200GB, 1600GB, 2000GB



LaCie USB/FireWire 2.5" MobileDrives

- Ultra-portable - only 7.6 x12.9 x1.7cm & 200g
- USB 2.0 and/or FireWire interface - cables included
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- Ideal for notebook/laptop users as mobile storage
- Sleek, robust enclosure - design by F.A. Porsche
- Compatible with Windows® backup utility
- 2 years manufacturer's warranty as standard

Available Models :
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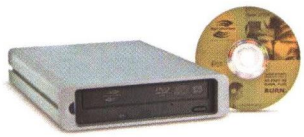
LaCie 'Biggest Disk' FireWire 800 & USB2.0 RAID

- Up to 2000GB, RAID 0, 0+1, 5, 5+ hot spare
- Exceptionally high transfer rates of 80MB/s FW800
- Sturdy aluminium enclosure & ultra quiet operation
- Compact size - only 15.3 x29.8 x17.6cm
- Hot swappable hard disks; superiour RAID security
- Automatic online rebuilding with RAID 5
- 2 years manufacturer's warranty as standard

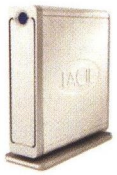
Available Models :
1000GB, 1600GB, 2000GB



LaCie d2 'Lightscribe' Firewire or USB2.0 16x DVD+/-RW's & CD-RW

- Lightscribe direct disk labelling technology
- For professional looking created media
- Double Layer DVD up to 8.5GB capacity
- Dual format DVD+/-RW (and CD-RW)
- Super fast write and re-write speeds
- Bundles Include DVD authoring software
- 2 years manufacturer's warranty as standard

Available Models :
DVD+/-RW 16x4x16x Double layer & CD-RW
CD-RW 52x32x52x



LaCie d2 'Ethernet Disk Mini' Network Hard Drives and USB2.0

- Share data across a network by unlimited users
- Easily administered via any web browser
- Quick and simple installation - no drives needed
- No server required, NAS hard drive
- Fast ethernet connection or USB direct attach
- For Windows®, Mac OS® and Linux
- 2 years manufacturer's warranty as standard

Available Models :
'd2' mini NAS & USB2.0 - 250GB, 400GB, 500GB
Ethernet Disk XP embedded - 800GB, 1000GB

LaCie Photon LCD Monitors

- DVI and VGA connectors
- Highest specification LCD monitors, IPS technology
- Photon 20 - resolution 1600x1200
- Photon 20 - response time 16ms
- Photon 20 - dot pitch 0.25
- Photon 20 - 176 degrees viewing angle (IPS)
- 3 years advance replacement warranty

Available Models :
Photon LCD/TFT 19"
Photon LCD/TFT 20.1"

LaCie 300 Series Monitors

- DVI and VGA connectors
- Highest specification Superfine TFT Panel
- 321 - maximum resolution 1600x1200
- 321 - response time 20ms
- 321 - dot pitch 0.27
- 321 - 176 degree viewing angle (S-IPS)
- 3 years advance replacement warranty

Available Models :
321 - 21"
319 - 19"

LaCie Blue Eye Pro Colour Calibrator

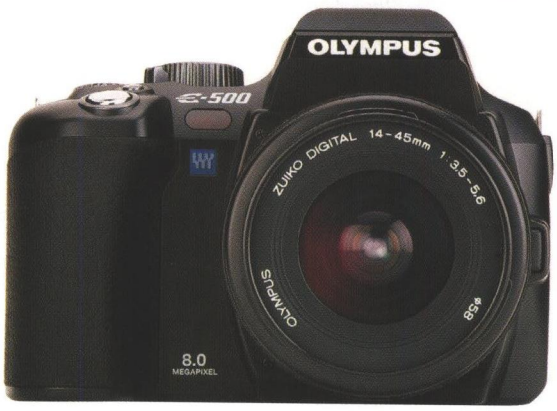
- Automatic hardware calibration
- Creates and activates advanced ICC profiling
- Time saver colour test modukle
- Switchable colourimetic environments
- Designed to complement the LaCie 300 series
- USB interface - all cables and software included
- 2 years manufacturer's warranty as standard

Available Models :
Blue Eye Pro
Blue Eye 2

Please visit www.lacie.com/uk

LaCie products are available from leading resellers - E-mail: info.uk@lacie.com

Olympus adds 8mp E-System



The E-500 is the latest addition to Olympus's E-System range of digital SLR cameras. The eight-megapixel Full Frame Transfer CCD offers larger pixels than traditional CCDs, according to the company, which enables it to produce images that have a greater range of exposure, more detail, and less noise.

The lightweight SLR features Olympus's own supersonic wave filter, which shakes the image sensor at 35,000 vibrations a second to remove dirt, producing cleaner images. A noise filter can be applied at high ISO values to minimise image noise. Metering has been improved over other E-System models, with 49 areas available to the sensor.

The E-500 uses a TruePic, Turbo image processor, which Olympus says ensures images offer lifelike colour, resolution and contrast. It has a 64MB image buffer, which allows four TIF or RAW images to be captured at 2.5fps.

Images can also be viewed in the buffer before being saved to the E-500's choice of CompactFlash or xD media cards, which is designed to save time deleting unwanted shots. They are viewed on the unit's 2.5-inch, 215,250-pixel LCD screen.

As part of the E-System, the E-500 can share lenses with the E-1 and E-300 digital SLRs. Alongside the launch of the E-500, Olympus has launched two zoom, a macro and two telephoto E-System-compatible lenses. The Zuiko Digital ED 18-180mm and Zukio Digital 17.5-45mm lenses offer 10x and 2.6x zoom respectively. The Zuiko Digital 35mm Macro lens allows 1:1 life-size shots to be taken.

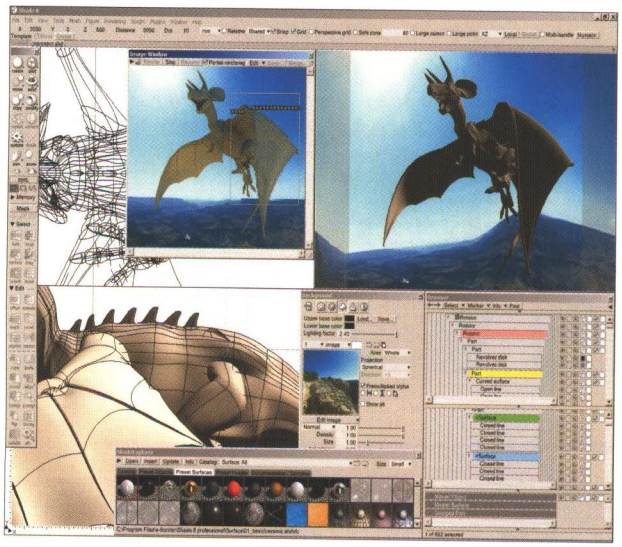
The Zuiko Digital ED 35-100mm is the world's first 1:2.0 telephoto lens, according to Olympus. The Zuiko Digital 90-250mm ultra-telephoto lens offers a bright 1:2.8 aperture.

The E-500 will be available in four kits, though pricing has yet to be confirmed. The Body Kit includes the E-500 body, BLM-1 rechargeable battery pack with BCM-2 charger. The SE Kit includes the E-500 body, the Zuiko 17.5-45mm lens, the LBH-1 battery holder, and three CR-123 batteries.

The Standard Kit includes the E-500 body, a 14-45mm lens, and the BLM-1 rechargeable battery pack with BCM-2 charger, for an estimated price of around £600 plus VAT according to Olympus.

The Double Zoom Kit includes the E-500 body, a 14-45mm lens, a 40-150mm lens, and the BLM-1 rechargeable battery pack with BCM-2 charger, for an estimated price around £650 plus VAT.

Olympus, www.olympus.co.uk



Shade 8 boosts rendering tools

E frontier has released an upgraded version of its Shade 3D artwork software. The company, which was previously called Curious Labs and is best known for being the current owner of the ubiquitous Poser, says that Shade 8 adds stronger modelling tools, as well as gaining a wider range of rending options.

Shade 8 offers boolean and bézier modelling tools, plus polygon mesh modelling and auto-smoothing of curves to detail projects.

Shade's Global Illumination Renderer supports photon mapping, path tracing, raytracing and what E frontier calls 'radiosity with physics'. Shade 8 upgrades the Callisto rendering plug-in with faster Radiosity calculation, translucent and metallic shaders, and support for aberration has been added.

A toon renderer for cartoon-style is also available.

The new release adds the ShadeGrid network rendering module, which supports a single other computer in the Standard version of Shade, or unlimited computers in the Professional release. The module automatically searches your network for render stations and administrates rendering.

The software includes the PoserFusion2 module, which allows Poser scenes and characters to be used within Shade.

Shade 8 is available in two versions for Mac OS X 10.3/4 and Windows 2000/XP. Shade 8 costs £102.13 plus VAT. Shade 8 Professional adds advanced modelling, lighting and rendering tools, and costs £476.60 plus VAT.

E Frontier, www.e-frontier.com

Power NURBs for 3DS Max

nPower Software has announced the release of Power NURBS 1.0. It's a hybrid modelling system that brings the highest orders of surfacing, solids modelling, analysis, and tessellation technologies to users of Autodesk 3DS Max and Viz.

Power NURBS provides advanced solids modelling tools such as booleans, shelling and variable radius filleting that are normally found only in high-end CAD systems; it also provides advanced surface modelling tools such as high continuity blending, multi-rail sweeps, and high continuity class-A surfaces normally available only in expensive surface modelling products, according to nPower.

Key functionality designed to improve design workflow includes a hybrid modelling paradigm that increases flexibility for building the most complex concepts, and surfacing algorithms that are designed to meet the exacting standards of the automotive and aerospace industries. Intelligent Objects retain their parameters and update automatically through design revisions, and advanced tangency controls designed to allow users to have interactive feedback and greater control over surface properties.

Power NURBS also enables designers to create solid objects that can be quickly turned into physical objects using modern prototyping techniques. Power NURBS costs $995 (around £565 plus VAT).

nPower Software, www.npowersoftware.com

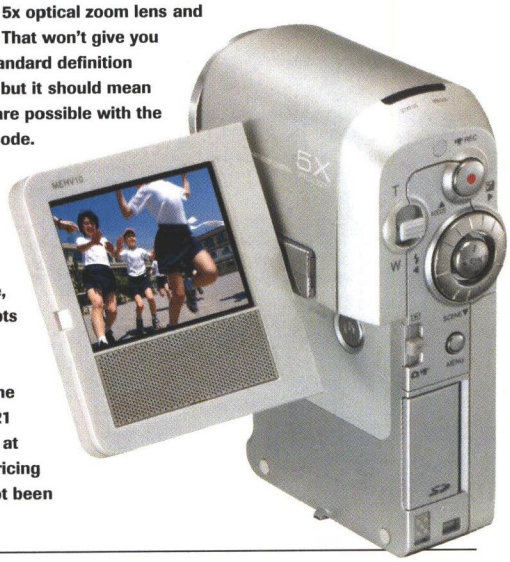
Toshiba shows off its HDD-based camcorder

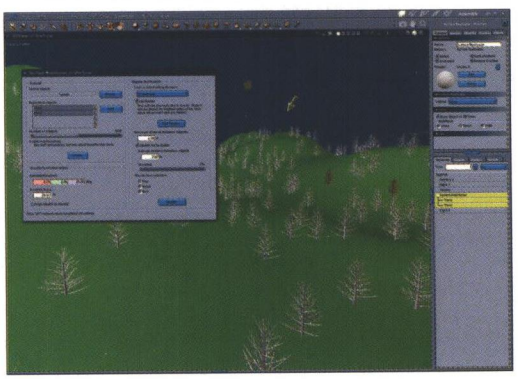
Toshiba has developed a digital-video camera based on its miniature hard-disk drive. The GigaShot V10 includes one of the company's 4GB capacity drives. The drive provides enough storage space for between one hour 25 minutes and four hours 15 minutes of video depending on the quality selected.

Features include a 5x optical zoom lens and a five-megapixel CCD. That won't give you anything more than standard definition images in video mode but it should mean good quality pictures are possible with the camera's still image mode. Footage and images can be viewed on the fold-out, two-inch LCD.

Should users run out of hard-disk space, the camera also accepts SD (Secure Digital) memory cards.

The camera became available on October 21 in Japan and is priced at ¥59,800 (£300). UK pricing and availability has not been announced yet.





Carrara 5 updates modelling tools

The next version of Eovia's Carrara 3D modelling, animation and rendering suite will feature a vertex modeller based upon the company's Hexagon modelling software, the company has announced. It will also add improvements to rendering and workflow tools.

The rendering engine has been upgraded to add support for subsurface scattering, displacement mapping and ambient occlusion. Subsurface scattering replicates the translucent nature of all non-metallic objects, and adjusts lighting accordingly. Displacement mapping and ambient occlusion speed up rendering by using textures with built-in light maps, and surface ratios for how much ambient light surfaces receive, respectively.

Import and export controls have been improved with Adobe After Effects and RPF format export, and support for matchmoving information from RealViz MatchMover and Anderson Technologies SynthEyes. Pricing is TBA.

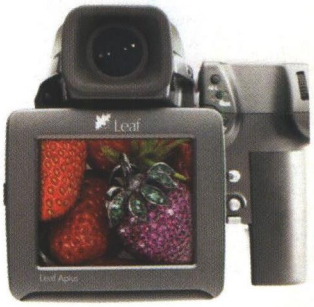
Eovia has also released version 1.2 of Hexagon. It adds a Symmetry Modelling mode that replicates manipulations on the mirrored part of any symmetrical object. Hexagon's selection tools have been expanded with Select 1/N for controlling regular parts of a surface, such as crumpling an envelope, and Dynamic Selection Painter for expanding or restricting selecting faces in the direction of mouse movement. Hexagon 1.2 gains the Dissociate Tool for disconnecting faces, support for alpha channels in texture maps, three lightmaps, and edge tools on multiselection.

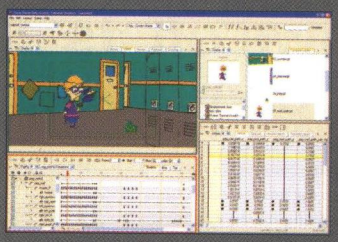
Eovia, www.eovia.com

Next-gen LEAF backs launched

Kodak has announced the LEAF Aptus 75 and the LEAF Aptus 65 camera backs. The Aptus will ship in November, with the Aptus 65 appearing in the first quarter of 2006. Pricing is TBA. The Aptus 75 records 34-megapixel RAW images at 6,726-x-5,040 pixels, which creates files around 200MB in size. The Aptus produces 28.4-megapixel images at a resolution of 6,144-x-4,622, which are around 160MB in size. Both feature sensitivity ranges from 50-800 ISO. Image quality benefits from a 7.2-micron pixel size, according to Kodak. Both units feature a touchscreen LCD.

Kodak, www.kodak.co.uk





Cel animators can now go it alone

Toon Boom Animation has released a cel animation package aimed at independent animators and small studios. According to the company, Toon Boom Solo offers a simplified workflow containing all of the steps necessary for animation production.

The software includes start-to-finish tools from scanning and drawing directly onto workspaces, through inking and painting, compositing, laying out animation in 3D space, applying special effects and rendering. According to Toon Boom, this enables any style of animation style or workflow to be replicated, including traditional, digital and cut-out. Features such as morphing, inverse kinematics and glue are included.

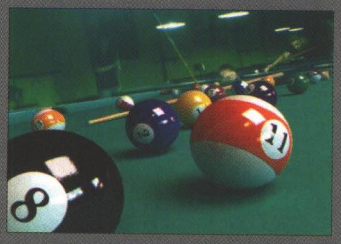
Toon Boom Solo will run on Linux, Mac OS X and Windows systems. It costs around £1,700 plus VAT.

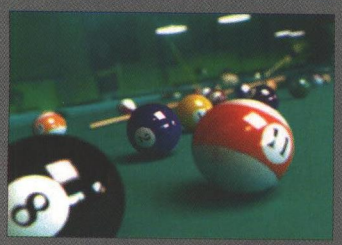
Toon Boom, www.toonboom.com

DOF Generator to bridge 2D and 3D

Richard Rosenman has released Depth of Field Generator Pro 2.0, a Photoshop plug-in that adds depth-of-field effects to 3D renders based upon grayscale depth maps. After 3D stills are rendered as images and as depth maps, the plug-in uses the latter to apply accurate depth-of-field effects to the former. Version 2.0 adds support for batch processing, so that multiple frames of animation can have DOF effects applied to them. Depth of Field Generator Pro 2.0 costs $59.99 (around £34)

Richard Rosenman, www.richardrosenman.com





Canon launches 16:9 XL H1 HD camcorder

Canon has announced an HDV camera that uses the same component-based design as the XL1, allowing parts such as the lens, microphone and viewfinder to be swapped for different units. The XL H1 uses three 1/3-inch 16:9 interlaced CCDs. It captures at resolutions up to 1,920-x-1,080 at a 50i frame rates – with a 25fps frame mode also supported. The camcorder features Canon's DIGIG DV II image processor, which maintains the correct colour space for HD, SD and still images. The XL H1 can capture still images at 1,920-x-1,080 to SD or MMC cards, using a separate Photo button.

The XL H1 uses the same XL-interchangeable lens mount as the XL1, XL1s and XL2. It ships with a 20x HD video lens with fluorite elements, which Canon says improves contrast, resolution and colour fidelity by reducing chromatic aberration. It offers a f/1.6 to f/3.5 aperture, with a 35mm equivalence of 38.9mm to 778mm in 16:9 mode, and 47.4mm to 954mm in 4:3 mode.

The 20x HD lens features Canon's Super Range Optical Image Stabilization (OIS) technology, which combines a gyro sensor with a system that detects low-frequency vibrations in the CCD image and feeds this back to the stabilizer. The lens also features a 72mm filter thread, two independent ND filters (1/6 and 1/32), and focus and zoom presets.

User can customize the 'look' of footage captured by the XL H1 using advanced features including three colour matrixes for colour correction and two ciné gammas for creating a variety of 'film looks'. Other controls include knee, black stretch, horizontal detail, coring, sharpness, noise reduction, colour gain, hue and master colour adjustments – which can all be modified independently.

The camcorder offers a wide range of outputs. As well as the standard FireWire I/O, the XL H1 offers HD-SDI and SD-SDI output for direct connection to broadcast systems and video-editing systems (for uncompressed capture). SMTPE time code input and output is supported, as is genlock. The camcorder can capture to HDV Master media or standard miniDV tapes.

UK pricing has not been announced, though Canon has said that it will ship in December, and costs $8,999 (£4,930) in the US.

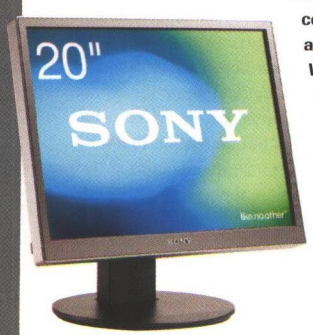
Canon, www.canon.co.uk

Sony monitor is pivotal release

Sony has released the SDM-S205 20-inch LCD display. The monitor features a 1,600-x-1,200 native resolution, and offers a high level of brightness and contrast – plus a fast response time – that makes it ideal for video editors and graphic designers, according to the company.

The monitor is available in two versions. The S205K adds Pivot software support - allowing the monitor to be used vertically at 1,200-x-1,600 resolution – and USB-based KVM (keyboard, video and mouse) switching technology to the base S205F model. This allows control of two computers from a single USB-based keyboard and mouse. The monitor features two USB inputs. When the input button is pressed, it switches USB as well as from DVI to VGA (or vice-versa). It can also be used for other USB devices such as dongles. The S205 has two VGA and one DVI-D input, allowing up to three computers to be switched between it. UK pricing is TBA.

Sony, www.sony.co.uk



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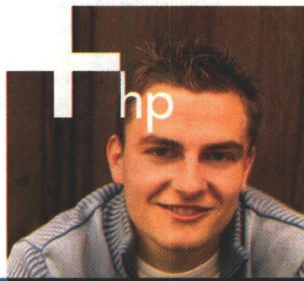

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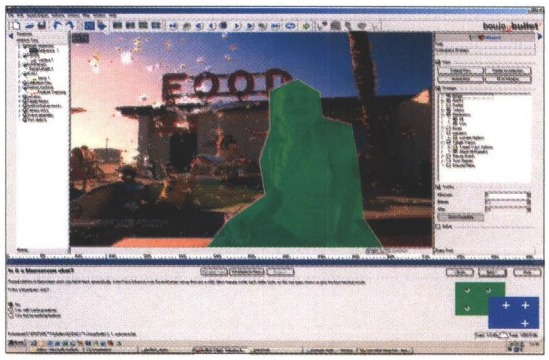
Boujou Bullet 2 fires up

2d3 has released Boujou Bullet 2, an upgraded version of it's comparatively low-cost camera-tracking and matchmoving software. Version 2 gives the tracking engine and interface an overhaul and adds new tools. The tracking engine has been taken from Boujou 3. 2d3 says that this delivers a tenfold performance increase. It identifies hundreds of features in a frame of video and can handle objects that temporarily block the field of view, extreme lighting, and radical camera moves.

Boujou Bullet 2 features a polygonal masking tool that can be used to isolate elements for motion tracking or removal. The interface has been rearranged to bring together a palette of shortcuts with integrated overlay and history tree displays. Boujou Bullet costs $2,500 (£1,415) for a single license. Upgrades cost $999 (£565), or $3,000 (£1,700) with an additional license. It runs on Linux, Mac OS X, and Windows.

2d3, www.2d3.com

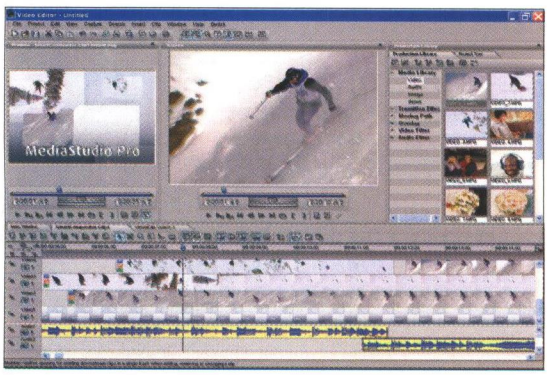


MediaStudio 8 is Smart

Ulead has released version 8 of its MediaStudio Pro video-editing software, which adds the Smart Compositor Tool, real-time HDV editing through a proxy and an Audio Editor. The Smart Compositor uses a wizard to create complex compositions with masks, frames and moving paths. Sequences can then be edited in the timeline afterwards as virtual clips.

HDV support has been added in the upgrade. HDV footage can either be edited natively on powerful PCs, or the Smart Proxy function can be used. This creates low-resolution versions of the clips within a project, so that they can be added without pause on laptops or lower-powered PCs. When an edit is complete, MediaStudio Pro automatically relinks to the original files and conforms the edit. It costs £170 plus VAT, and runs on Windows.

Ulead, www.ulead.co.uk



Cameras to focus on bigger screens

Digital cameras may be getting smaller, but Olympus and Sony have increased the size of the viewing screen used by many photographers for framing their shots. Both have released models with three-inch LCD screens, which take up the majority of the rears of the SP-700 and Cyber-shot N1. The Olympus SP-700 features a 6.0 megapixel CCD and a 3x optical zoom lens (equivalent to 38-114mm in 35mm format). It has an 11MB internal memory, and an XD-Picture Card slot.

Olympus describes the three-inch, 230,000-pixel screen as a 'Sunshine LCD', as it's usable in bright conditions, according to the company. The size enables the camera's Compare and Shoot function, which shows four previous shots down the side of the main images – so that the user can make adjustments based on how these came out.

The camera features 24 scene modes, including an underwater mode for use in conjunction with the PT-013 underwater case, Red-eye Fix, Macro and Super Macro (for shooting objects as close as 1cm away).

The Sony Cyber-shot N1 has an 8.1-megapixel CCD and 3x Carl Zeiss Vario-Tessar optical zoom lens. Its compact aluminium body is only 22mm thick, and it weighs only 151g.

The N1's three-inch screen is a touchscreen – allowing users to pick autofocus points by touch, for example, and features a smooth anti-reflection layer to avoid glare. The camera uses a Clear RAW NR noise reduction system to allow usable images to be taken at higher sensitivities up to ISO 800, according to Sony.

Sony says that the N1 can take up to 300 shots on a single charge of the rechargeable lithium battery. Pricing for both models has yet to be confirmed.

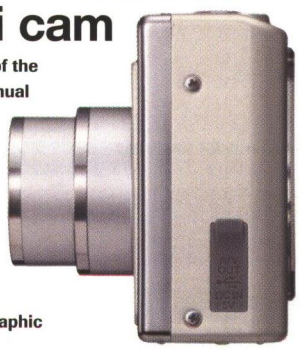
Olympus, www.olympus.co.uk
Sony, www.sony.co.uk

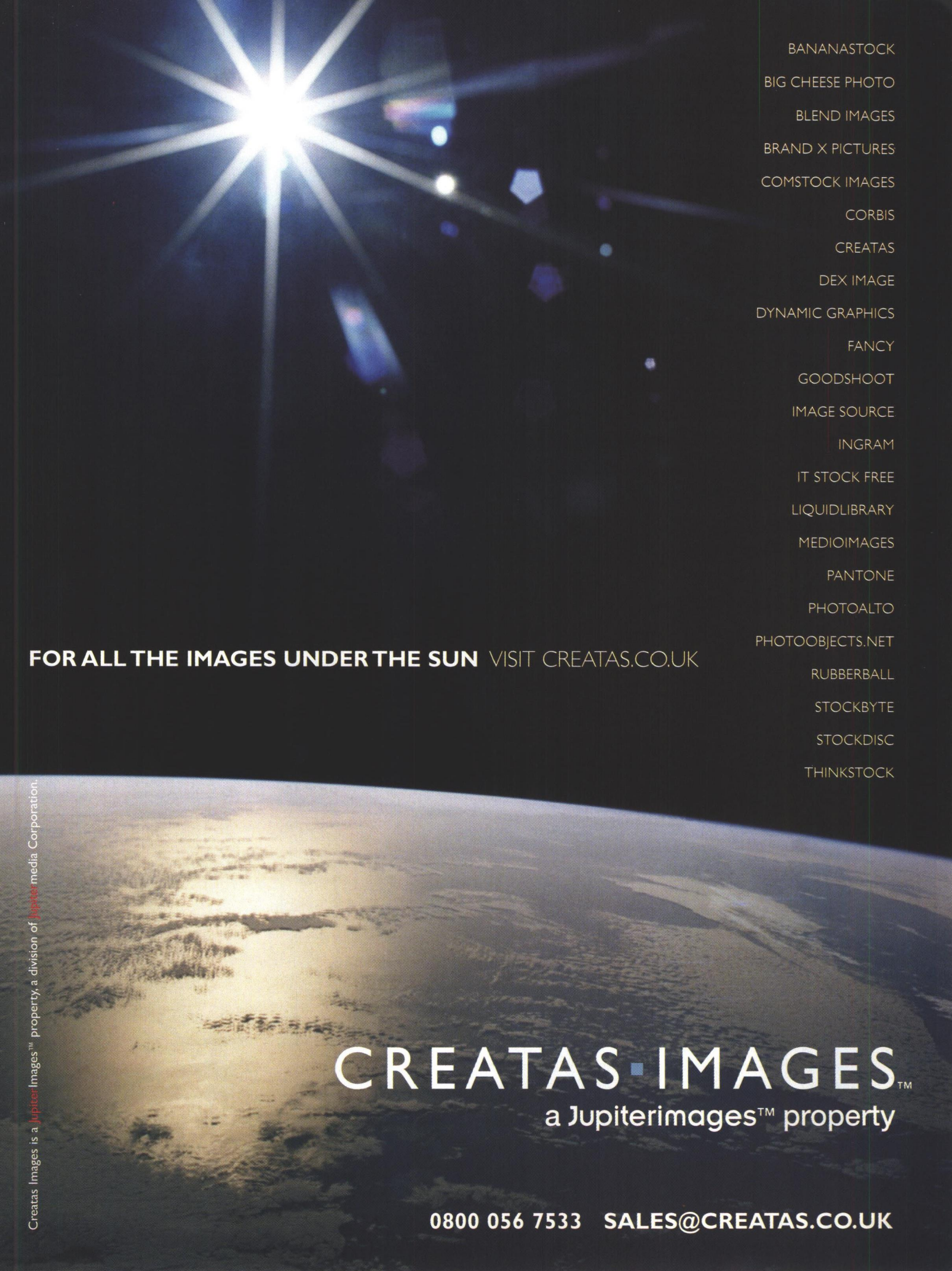
Fuji adds manual to mini cam

Fujifilm has launched the FinePix F11 Zoom, an upgraded version of the small-&-sylish F10 Zoom that adds improved functionality and manual shooting options.

The F11 Zoom has a 6.3-megapixel CCD and a 3x optical zoom lens (36-108mm in 35mm equivalence). It features a high-resolution 153,000-pixel 2.5-inch LCD monitor, a macro mode down to 5cm, and supports ISO modes from 80 to 1600. It uses xD-Picture Cards as storage media, and supports the PictBridge standard for direct printing without using a PC. The F10 Zoom featured few manual controls, but its successor adds aperture priority and shutter priority modes for more photographic controls. The FinePix F11 Zoom will ship in November.

Fujfilm, www.fujifilm.co.uk

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BLEND IMAGES
BRAND X PICTURES
COMSTOCK IMAGES
CORBIS
CREATAS
DEX IMAGE
DYNAMIC GRAPHICS
FANCY
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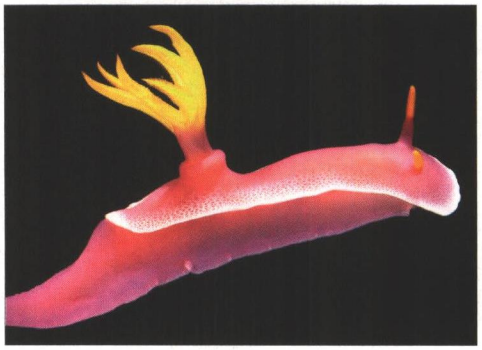
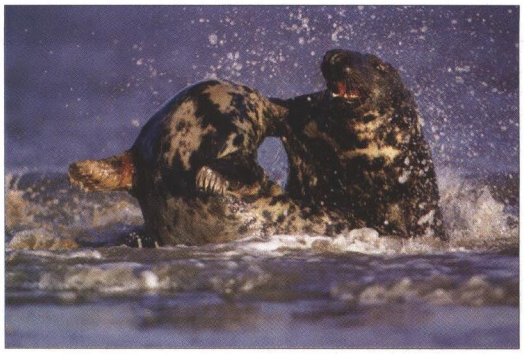


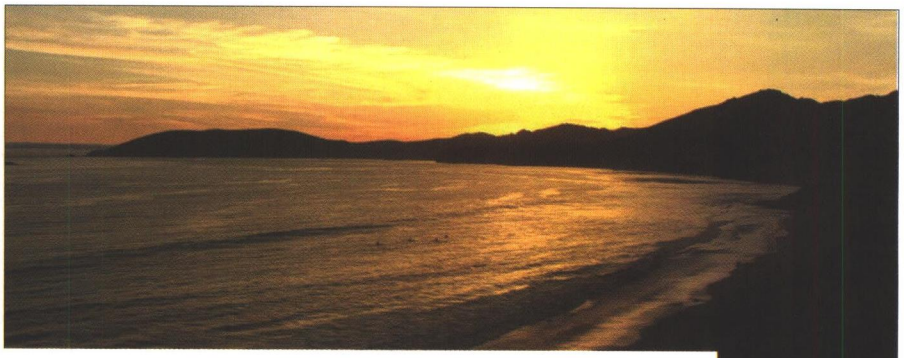


EXPANDING THE NATURAL WORLD

www.naturepl.com, 0117 974 6720

The Nature Picture Library has enlarged its photo collection with over 10,000 images in the past six months, the company has announced. Highlights include American and European birds by newly-added photographer Rolf Nussbaumer, wildlife shots from Finland by Jorma Luhta (above, centre and right), and a study of sea slugs by Solvin Zankl (above). Our main image is taken from a new collection of photographs of Pacific Islands.

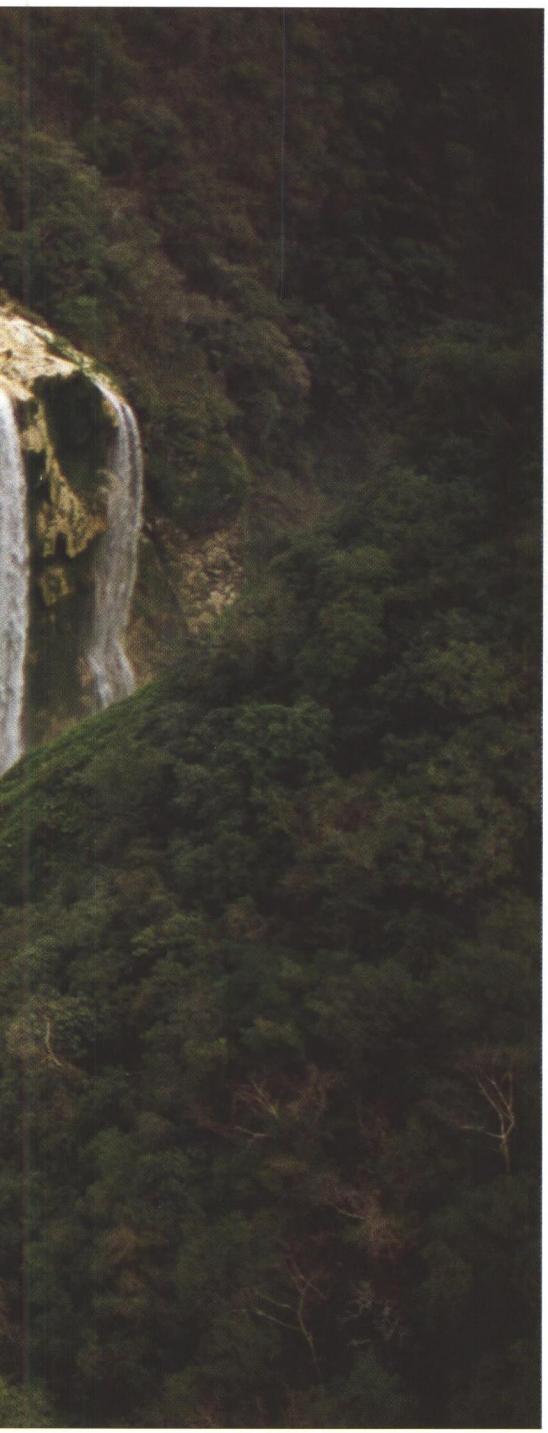
above left. ***1128187*** above centre. ***01091603*** above right. ***1121256*** right. ***1127063***

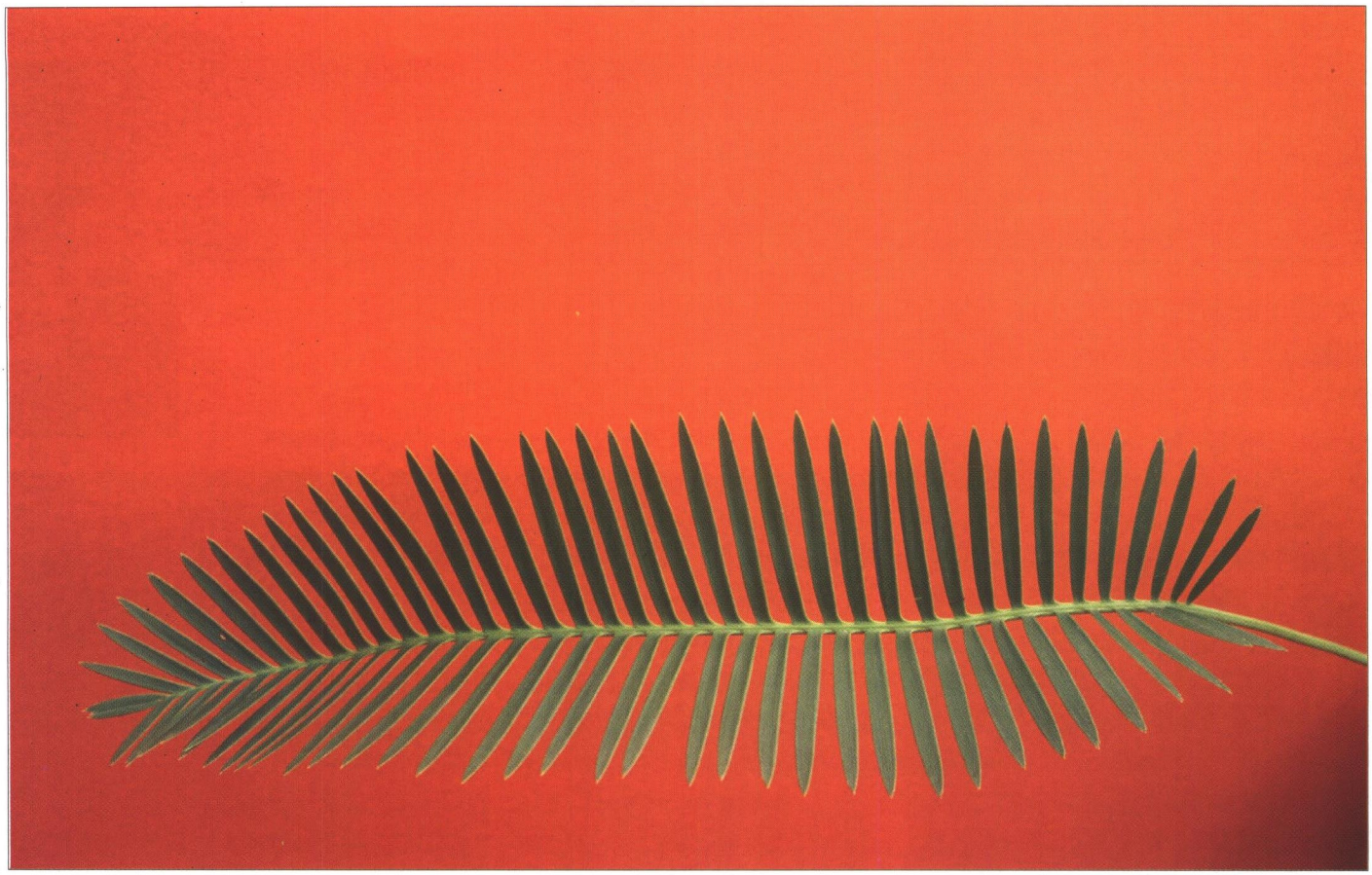


MAMMOTH HD GETS BIGGER BY 12

www.mammothnd.com, 001 303 670 7973

Mammoth has added 12 collections of stock footage to its site, bringing the full number of collections up to 199. All bar two (*Sharks* and *Kelp Forest*) are available in HD and HDV formats, including *California Coast* (above), *Kite Surfing* (below), *Goldfish* (bottom) and two volumes of *Sturgis, Hog Central.*





IT'S A GARDENER'S WORLD

www.gardenpicture.com, 020 7228 4332

Garden Picture Library has launched a fully ecommerce-enabled Web site to make finding and purchasing images easier. The library, which has been running since 1987, is a specialist source of images covering gardens, flowers, and gardening lifestyle. The upgraded site allows designers to search through the library's 400,000 images, create lightboxes and purchase images with a credit card.

top. ***gpwi05-00000030-001*** above. ***gpjo02-00000038-001***
right. ***gpjo02-00000038-001***

REMINGTON TYPEWRITER FAMILY REGULAR / ITALIC \{ ([@$%&!]) }/

Remington Typewriter
Remington Typewriter Italic

AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoP
pQqRrSsTtUuVvWwXxYyZz1234567890
AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoP
pQqRrSsTtUuVvWwXxYyZz1234567890

KENNERLEY FAMILY REGULAR / SWASH \{[@$%&!]}/

Kennerley
Kennerley Italic
Kennerley Open Caps
Kennerley Small Caps
Kennerley Swash

AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQ
qRrSsTtUuVvWwXxYyZz1234567890
AaBbCcDdEeFfGgHhIiJjKkLlMm
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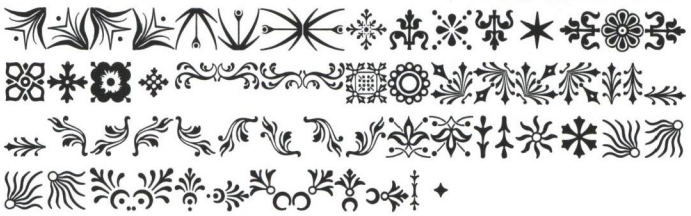
ORNAMENTS TWO FAMILY NF

Ornaments Two



CASLON REMIX FAMILY NORMAL \{[@$&!]}/

LTC Caslon Remix

AaBbCcDdEeFfGgHhIiJjKk
LlMmNnOoPpQqRrSsTtU
uVvWwXxYyZz1234567890

HESS MONOBLACK FAMILY REGULAR \{([@$%&!])}/

Hess Monoblack

AaBbCcDdEeFfGgHhI
iJjKkLlMmNnOoPpQ
qRrSsTtUuVvWwXx
YyZz1234567890

TWENTIETH CENTURY FAMILY REGULAR \{{[@$%&!]}}/

Twentieth Century Medium
Twentieth Century Medium Alt

AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPp
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AaBbCcDdEeFfGgHhIiJjKkLlM
mNnOoPpQqRrSsTtUuVvWw
XxYyZz1234567890

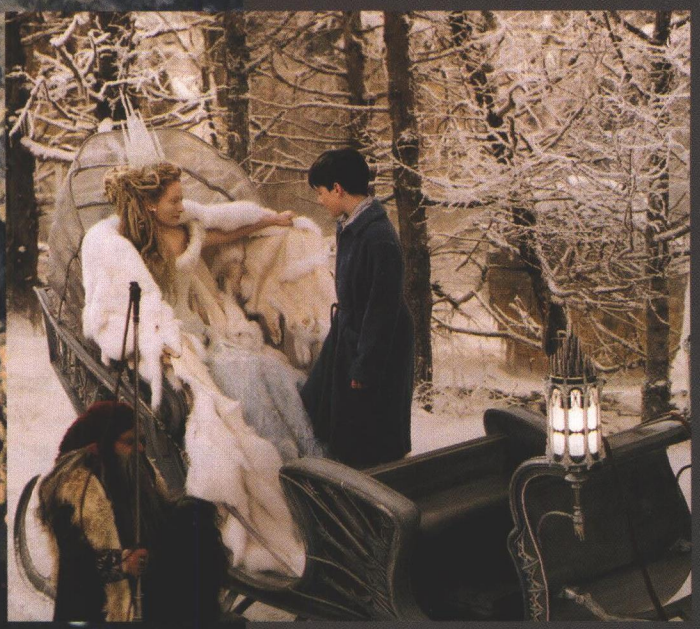
NEW FACES

***P22* www.p22.com**

The P22 Type Foundry has released a series of new fonts, including new digitizations of classic Lanston metal faces such as Artscript, Nicholas Cochin, Remington Typewriter and Goudy Text. All have alternates and all are in OpenType format.

P22 has remastered the Kennerly font by Frederic Goudy and the Cloister family by Morris Fuller Benton – plus a revised version of the popular Twentieth Century Medium featuring alternates based upon the original experimental Futura font. It has also digitized the very rare Hess Monoblack font, plus Ornaments 2 and a remastered Ornaments 3. Prices begin at $19.95 for single fonts.

The company has also released the *William Caslon Experience* CD, which includes an exclusive "remixed" version of the Caslon font, plus a 'best-of' choice of songs from the eponymous downtempo duo. It costs $15.95.



pulse

Be inspired by the latest happenings in the world of creative design

by Lynn Wright

<< WITCHING HOURS

December 8 will see the release of *The Chronicles of Narnia: The Lion, The Witch and The Wardrobe*. The most famous book in CS Lewis' fantastical reimagining of Bible stories has been given a big budget makeover with a whopping 1,400-plus visual effects shots.

To create this amount of work, Disney brought together the talents of Industrial Light & Magic (ILM), Rhythm and Hues, and Weta Digital for the first time – sometimes even on the same shot.

Approximately half the cast is populated with CG characters – including the Messianic lion Aslan. There are also many part-CG roles, such as the half-man, half-goat faun Mr Tumnus.

The film stars Tilda Swinton as the White Witch and a voice cast including Liam Neeson as Aslan, and Rupert Everett as Fox.

Almost like a children's version of *Lord of the Rings*, the film should be a major hit and the beginning of new major movie franchise. Expect *Prince Caspian* as soon as they can make it.

www.narnia.com

<< PLAY THE GAMEBOY

Nintendo will launch its newest handheld, the GameBoy Micro, in the UK on November 4. It will cost £69.

The Micro is easily the smallest member of Nintendo's hit GameBoy family, as its name suggests. At 10cm long by 5cm deep and 1.7cm thick, the device is smaller than a deck of cards yet packs gaming power. Nintendo says it has about the same power of previous GameBoy models despite its diminutive size.

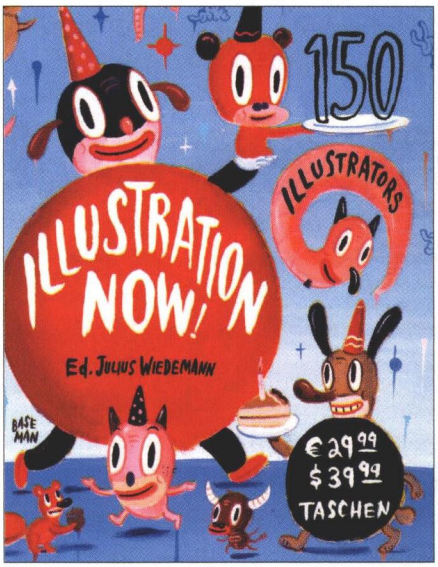
The handheld includes a two-inch colour LCD screen and buttons for both game control and menu selection. A number of face plates can also be bought to change to look of the device.

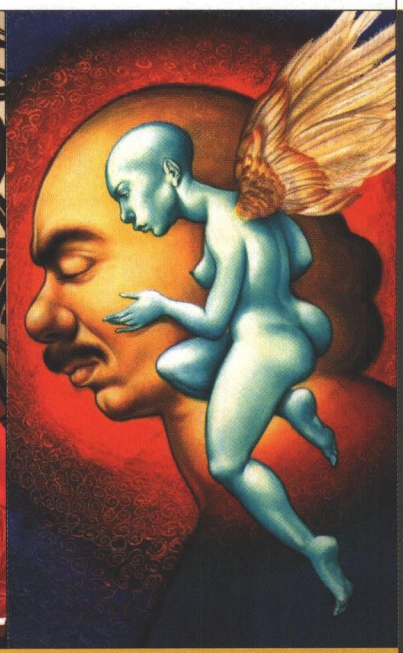
www.nintendo.co.uk

ILLUSTRATION NOW! >>

Subtitled *Drawing power: the world's hottest illustrators A to Z*, this comprehensive guide showcases 150 of today's best commercial and editorial illustrators from over 50 countries; each entry highlights examples of recent work and includes the artist's contact information, favourite media, awards, clients, and work philosophy. It celebrates illustrative work across all media from magazines and newspapers to ads, Web sites, album covers, and even mobile phone wallpaper. Edited by Julius Wiedeman, this 544-page book costs £19.99 from Taschen.

www.tashen.com



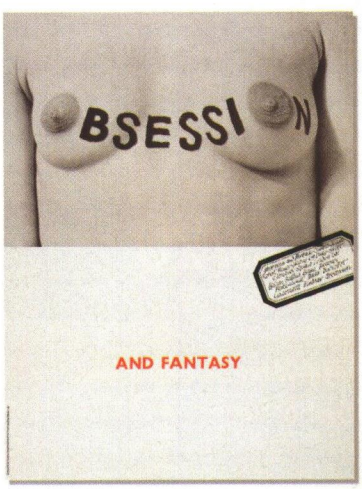


<< ROBERT BROWNJOHN

Famed for his decadent lifestyle and extraordinary talent, Robert Brownjohn was among the most gifted graphic designers of the 1950s and 1960s. After studying under László Moholy-Nagy, he made his name as an innovative typographer and image-maker in late 1950s New York, before moving to London in 1960.

Brownjohn captured the experimental spirit of the era by applying modernist visual theory to mainstream culture in the titles of the James Bond films *Goldfinger* and *From Russia With Love*, artwork for the Rolling Stones (left) and graphics for the Robert Fraser Gallery. Designed by his friend Alan Fletcher, this exhibition introduces Robert Brownjohn's work to a new generation of designers.

www.designmuseum.org



^^ BLINGTASTIC PSP CASE

If you missed out being the first to buy a new Sony PSP, you can up the ante with your mates by buying the ultimate PSP accessory. Essential for all gangsta wannabes, this £20,000 gold and jewel encrusted PSP was designed by Kimora Lee Simmons of US fashion label Baby Phat. Made from 1lb of gold, and covered with eight carats of yellow and black diamonds, the cover features jewel charms designed by Simmons Jewellery hanging from the base. The case is exclusive to top London store Harrods (natch), who are taking orders for this ultimate bling Christmas present. Santa says you better be good!

www.babyphat.com

vv NEW DUO FROM SONY

A stroke of design genius, or perhaps desperation? Decide for yourself after seeing Sony's new Walkman and Network Walkman digital music players.

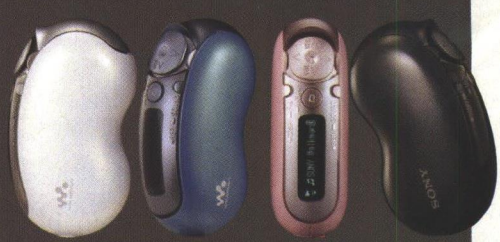
The Walkman (right) is available in capacities of 6GB and 20GB, and offers an 'artist link' function. Clicking the link button while a song is playing highlights stored music from similar musicians and genres.

There are also several shuffle modes in all the players, including a 'time shuffle', which will play all the stored songs from a selected year, and a mode that randomly plays songs from the top 100 most listened-to tracks.

Sony looked to jellybean candy for inspiration in designing its other new Walkman digital music players. The players are bean-shaped and will be available in colours that are intended to match various jellybean flavours: tropical ice is blue; cotton candy is pink; licorice is black and coconut is white.

The bean-shaped players will be available in four versions: the NW-E205 and NW-E305 have 512MB of memory and the latter model has an FM radio, and the NW-E207 and NW-E307 have 1GB of memory with an FM radio in the latter model.

www.sony.co.uk



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MAKING OUT WITH MAYA

AUTODESK MAYA IS ON THE CARDS

There are several truths about the 3D animation and modelling world – some are laugh-out-loud; some serious. One of them is that many 3D designers appear to have never actually met a woman who wasn't pixelated, or carrying a large array of weapons. Guys (and it's usually guys), when modelling 3D females, you aren't starring in your own movie version of Weird Science. Women simply aren't that, well, large when it comes to breasts, or that thin when it comes to waists – at least, not at the same time. And, don't you think the ammo belts might chaff, especially if all they're wearing are virtual nipple tassles?

The other truism is that 3D software companies rarely make money: seeming to surface, dazzle, and then fade with all the characteristics of cheap fireworks. And the ones that have stuck around have had to enter into the type of price war that would make supermarkets think twice. It's an aggressive, cut-throat, but ultimately incredibly sexy industry – crap 3D models of women aside.

Yet the stunning, hell-has-frozen over news that Alias is to be snapped up by industry rival Autodesk flies in the face of anything that has gone before. The acquisition – if it goes ahead – will create a 3D company that owns 70 per cent of the market, and reduce the Big Four (along with Softimage and NewTek) down to the Big Three.

Now, it's easy to be cynical when mathematics are involved, but the cheapo freebie solar calculator I picked up on a recent Press jaunt has been begging to be used. A couple of presses on the vomit-green buttons later, and something interesting emerges.

About and year-and-a-half ago, Alias was wrenched from its SGI parent by Accel-KKR, a private-equity firm that specializes in technology companies. It paid a then quietly impressive $57.7 million in cash for Alias, along with its Maya and StudioTools line. **Fast-forward to today, and Autodesk are picking up Alias for a rather larger $182 million. In cash.** Someone, somewhere, has made a killing, and it wasn't SGI and it might not be Autodesk, despite its deep pockets. That's a profit of $124.3 million in 18 months! Rejoice! 3D software companies can make money (or at least their backers)!

Of course, the real reason that Alias accepted was the proposed synergy that the move offers customers, and nothing at all to do with money. Which reminds me – in a completely unrelated way – of the comment TV host Mrs Merton asked of Debbie McGee, about "why she married millionaire magician Paul Daniels".

Money and 3D is sometimes like 3D modellers and women. It can seem unreal, unnatural, and frankly a little uncomfortable. That said, at least Alias has ended up in the hands of a company that – while large – seems passionate about 3D, and wants to move into the entertainment 3D space. And, with an R&D budget of $300m, Autodesk Maya users may actually reap the benefit. Just go on a few dates first, OK, and realize that women and guns aren't an everyday event. You only need to look at the work of Meats Meier (left) to see what's possible.

Matthew Bath

respond

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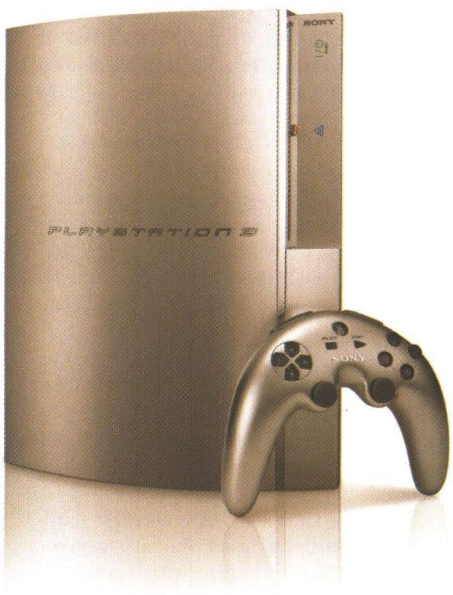
Please note that personal correspondence cannot be entered into.

Stock telephony

I was wondering why all of the 'hot stock' for autumn and winter (Digit 92) looks like it came out of mobile phone commercials?
Jane Donovan

DIGIT: *We think this says more about the cutting edge style of the mobile phone adverting business than the current nature of stock.*



Learning the business

As I'm in the process of setting up my own design business, I read your article (Digit 92) with keen interest. While most of it follows my own experiences and I've learned some important pointers for promoting us when we're ready (which we're not yet), I'd like to expand on your point about getting some help if you're not 'financially-minded'.

At first I tried to kid myself that an evening course in business management would be enough, but soon I learned that there's a reason why I got a 'D' in O-level maths – I'm crap with figures and it bores me enough that I don't care enough to try at all. But I found a solution.

The wonderful thing about running a business – as compared to going freelance – is that you can get help. Or if you're as useless as me at that side of the business, you get a business director in to do it for you. And if you're lucky they'll even have some capital of their own to help you set up.

Yes, you have to put up with not being able to swan around like Donald Trump and discuss important decisions – such as why we should blow half the promotional budget on some embossed plastic business card – with another person. Oh, and you have to share the profits with them. But it's worth it to ensure your business is still afloat in six month's time and you're not out on the street.
Name supplied

DIGIT: *Good point, well made. Key to the success of your business is identifying your weaknesses as well as your strengths – and finding a way to make up for them.*

HD-DVD vs Blu-ray

Regarding your online article by Melissa J Perenson ('HD-DVD claims the brand advantage', August 17), I agree the HD-DVD brand may seem to have a clear advantage, but the article has no mention of Playstation 3. The next generation console from Sony has a Blu-Ray drive, just as the Playstation 2 had a DVD drive.

Considering the impact PS2 had on the DVD market, and just how many PS3's will be flying off shelves come Spring 2006, the argument of adoption and cold feet to new technology will be as dead as HD-DVD by the end of next year.
David Mitchell

DIGIT: *The piece was not trying to decide a winner between the two formats, rather commenting on a piece of research commissioned by the backers of the HD-DVD format.*

While the backers may want to say that the results of the survey favour HD-DVD, it's plain for us to see that consumers favour only one standard – they just don't care which one it is. They want to buy a player or a console and have it play hi-def movies with interactive content, without being locked out of certain content because of the choice that they made.

I've Ad enough

First of all I want to congratulate you on the excellent work you do at Digit. Your Web site always has the latest news on computer graphics and digital art, and news – as well as articles – are presented in a very polished, professional way. I would not hesitate to say it's one of the best.

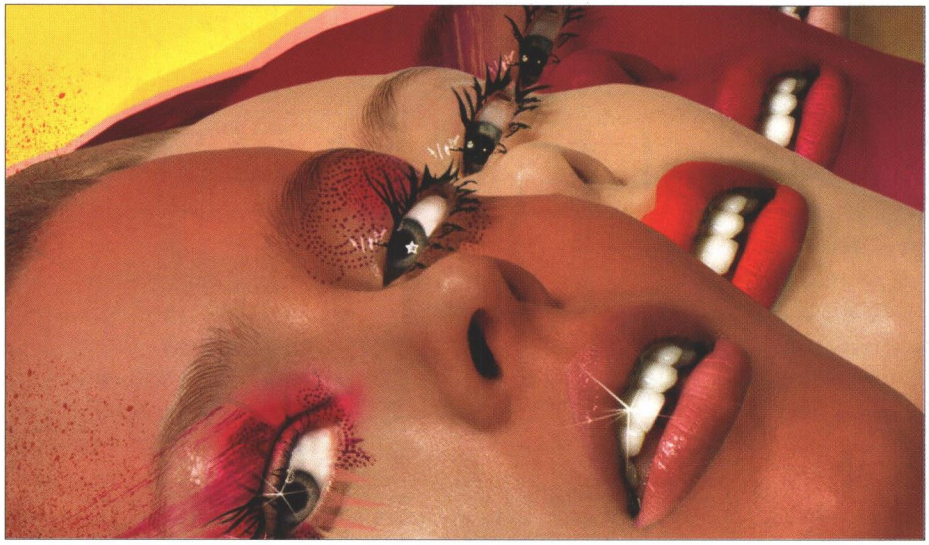
This being said, I wanted to express my concern regarding the recent introduction of ads that interrupt the flow of text in news articles.

They are very bothersome to readers and really do a disservice to the quality of what you are publishing. Please, do consider leaving the ads to the side (or bottom) of the text and allow us readers to enjoy the content without so many interruptions.
Pablo Hadis

DIGIT: *The adverts you refer to – known as MPUs – are necessary to ensure that we're able to deliver news without having to charge you. This type of advertising is now standard across editorial Web sites around the world. We're sorry that you find it distracting.*

XPress-ing a choice

Cheers for your in-depth article on QuarkXpress 7 (Digit 92). It's removed all of my worries about moving to InDesign six months ago.
Christian Jones



star letter: The bad touch?

One would gather from *The golden touch* (Digit 91), as well as Matthew Bath's column, that the ability to digitally manipulate images has wrought a situation in which printed imagery is most likely not what was actually photographed. As a once traditionally-trained retoucher, I can assure you this has been the case for as long as there has been gauche, paint brushes, dye, airbrushes and bleach (not to mention razor blades and paste).

Concerning the use of Oprah Winfrey's *TV Guide* magazine cover as an example of Photoshop gone bananas, I'd suggest that this was a traditionally executed painting using a filed reference photo of Ann Margaret for body position. I imagine the artist used a reference photo of Oprah for the face too.

This "scandal" was a smack in the face to illustrators the world over. Everyone knows a real illustrator would have booked an hour of Ms Winfrey and her stylist's time – at whatever rate would have made her take time from her already booked schedule – secured a round trip plane fare to Chicago, ordered a table-sized stack of cut-&-bundled prop money for her to sit on from the nearest graphics printer, and rented an appropriately elegant gown. Then simply handed *TV Guide* the million dollar bill.

Sixteen years on, this illustration is still being presented as a fraud, when the only victim here is the illustrator who had *TV Guide* as a client.

Emyr Derek

DIGIT: *Our inclusion of this image was in no way a comment on the skills or culpability of the illustrator behind the image. It's just a startlingly good example of the line between what you can get away with and what you can't – which is the line that counts the most.*

Write in & win

This month, the star letter wins a copy of ILEX's latest book, *Digital Manga Workshop* by Jared Hodges and Lindsay Cibos – worth £16.95. The book contains a wealth of information for any creative interested in exploring the digital possibilities of creating manga-style artwork. It walks through the entire process, from initial rough sketches, to the finished colour image, with in-depth instructions and illustrations that show each step in detail. It also deals with a variety of inking and colouring styles – revealing the secrets of how to achieve smooth, highly detailed line art directly on screen, how to recreate the appearance of traditional animation with cel-art techniques, and how to achieve the look with airbrush, watercolour, and painting tools. To order your copy with a 20 per cent discount and free postage & packing (usually £3.50) giving you a total saving of £7, just visit **www.ilex-press.com/ digitoffer** to benefit from this great offer, as well as or more information about other new and exciting Ilex titles.

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TYPEFACES
Imago BQ, EvoBQ, Helvetica, Digger

PRODUCTION SERVICES / DIGITAL STOCK PHOTOGRAPHY
Printed by St Ives (Roche) / Stock photography from Getty Images, plus additional images from Digital Vision

TECHNOLOGY
Apple G5 and Dell 650 workstations, Adobe Photoshop CS, Adobe InDesign CS, QuarkXPress 4.1, Adobe Acrobat 6.0, Nintendogs

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DESIGN TIME

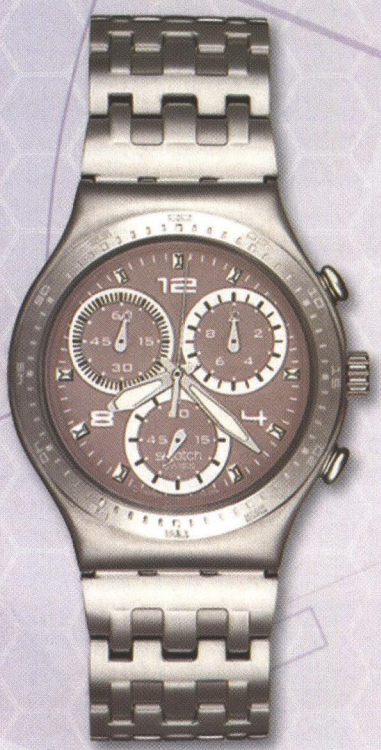
DIGIT CELEBRATES THE SWATCH WATCH – 80S FASHION ACCESSORY, ENGINEERING MASTERSTROKE, AND DESIGN PHENOMENON.

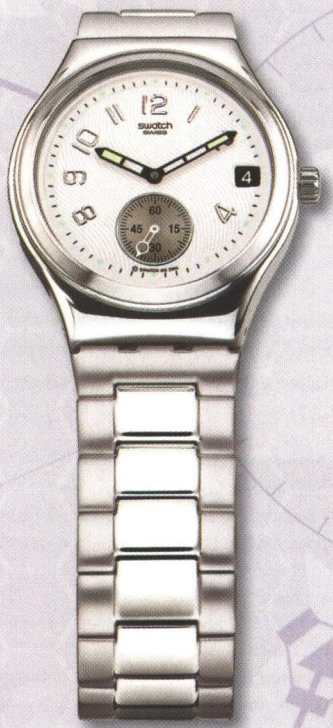
It's funny how something as cute and collectable as the Swatch watch was born out of desperation. In the 60s and 70s, the old guard of watchmakers in Switzerland were being outdone by upcoming Japanese electronics manufacturers. The likes of Seiko were beating the Swiss at their own game, and something had to be done.

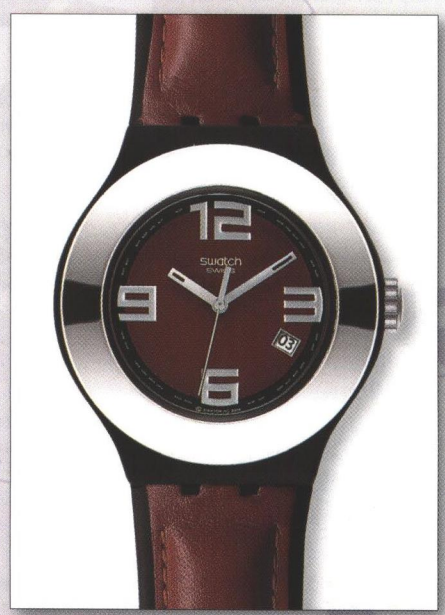
The low-cost, no-frills Swatch watch was the answer, and Swiss watchmaking has never looked back. It soon became one of the most significant fashion accessories of the 1980s, and designers from Andy Warhol to Vivienne Westwood have applied their talents to this simple canvas.

Early prototypes of the watches were designed by three engineers – Ernst Thonke, Jacques Muller, and Elmar Mock. The Swatch watch was 80 per cent cheaper to produce than conventional watches, thanks to automated assembly and design innovations. Conventional watches were composed of 91 pieces, but the Swatch team reduced this to just 51 – the company even produced a transparent one to prove it.

An 80s throwback, maybe, but Swatch changed the watch industry and put the Swiss back at the top.







swatch
swiss
"Sea Tigers"

Cuddling up to clients

Whether you're inspiring a brand or walking on eggshells, handling clients is as much of an art as design itself.

BY MICHAEL BURNS

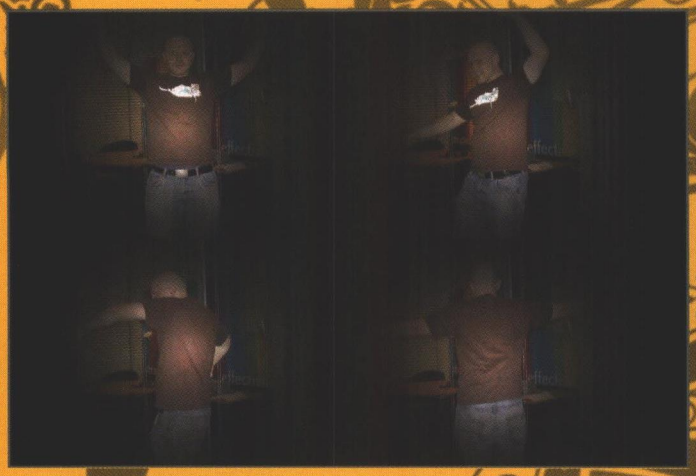
Forget creative challenges of operating in the design industry, the real challenge is handling your clients. In a design-led business, is the client always right? How can you retain creative integrity in the face of commercial pressures? Sure, you've got to handle the everyday stuff, but how can you do that *and* dazzle the client with your creativity?

Right from the start you have to be careful when handling clients – after all, if it wasn't for them, you'd have to get a boring job.

"First and foremost, do your research," advises Michael Berthon, creative director at English & Pockett. "Make sure you know your clients – their organization and their market." Initial contact with the client is the first hurdle. A face-to-face meeting is the only way of clearing it safely.

"Forget conference calls or video links," says

Image courtesy of Tomorrow London



A match made in heaven

CLIENTS DO COME GOOD SOMETIMES...

Andrew Brown, creative director at Swamp, says that the relationship between agency and client can produce good ideas. "On the latest Products section of the Umbro Web site, we really wanted to try and show products in a way that brought them to life and wasn't just a shirt that you could spin around," he says. "We began talking through with the client the possibilities of doing 360-degree photography, but as always necessity is the mother of invention and there wasn't the budget to get the cinema effects we wanted.

"By giving ourselves the space and freedom to speak to the client at any point and jump up and go outside with the digital camera and try things, we developed a way of stop motioning an actor that proved to be a really effective way of showing off the kit. The client at Umbro would randomly receive large animated GIFs in her inbox, followed by excited phone calls. It felt like we achieved a real creative flow and an idea was developed and grew organically directly as a result of bouncing ideas between the team and the client." The resulting work is pictured on this page.
(www.umbro.com/evolutionx/)

Berthon. "Whenever possible, a face-to-face meeting is the single best way to establish a relationship at the outset of any project."

It's crucial to set the tone for the relationship in the initial briefing session. Ideally you want to be the one guiding those decisions so it's important to be informed, intelligent, confident, and calm. It's also important to have the key decision makers at every meeting, or nothing gets agreed.

Nice to meet you

"Meetings can easily descend into chaos or rambling because they have no fixed agenda, so set yourself small deadlines or milestones for the meeting and try to stick to them," advises Alec East, media director of Tomorrow London. "Controlling a meeting can be more about shutting-up and listening or asking questions of the client than it is about talking non-stop about your bold new concept."

Sometimes there is difficulty in finding out what the client actually wants. In this situation, Web design agency on-IDLE carries out a competitive analysis of the client's company – looking at similar Web sites and what the background of the clients sector or market. "If the client has provided a brief, that normally helps, but we try to answer more than the brief," says managing director Ané-Mari Peter. "Past experience is enormously important. Based on the language the client uses and the type of company, you can start to make qualified guesses as to the type of relationship they're looking for."

Clients are in business too, so they usually know their own minds. Sometimes, the client's agenda will be frustratingly rigid. "When you order a pizza you can have extra mushrooms or take the pepperoni off, so don't be

SURE, YOU'VE GOT TO HANDLE THE EVERYDAY STUFF, BUT HOW DO YOU DO THAT *AND* DAZZLE THE CLIENT WITH YOUR CREATIVITY?

Keeping your client informed throughout the project is vital for an ongoing relationship, says Mark Iremonger of unit9. Weekly or two-weekly meetings keep the client in the loop. "We define teams quite clearly and keep out lines of communication with clients very clearly defined." The company's approach has contributed to some outstanding work, including an online game for the lauded Honda *Grrr* campaign (bottom row), and work for Virgin (top row).

surprised or insulted when a client makes a few changes," says Alec East. "Build some room into the budget. Be honest with them – and yourself – about it, so they know how many days worth of changes and iterations they get included before you have to start charging them extra." Regular sign-offs and good communication can help avoid dramatic, show-stopping changes.

"For a client inexperienced in commissioning design, it is entirely understandable that their expectations may be much higher than their budget will achieve," continues East. "This isn't helped when a creative suggests a fantastic idea that is far beyond their means."

It's always a good idea to be sure where you stand legally. Simon Halberstam, Partner at Sprecher Grier & Halberstam LLP and Weblaw says it's important to put everything in writing at the start of a commission. "It may sound obvious," he says, "but you will handle client expectations better if you confirm in writing to the client before you start exactly what you will do, how you will do it, when you will do and at what cost," he advises. "It's better to clarify any misapprehensions right at the beginning rather than after the work has been done. Make sure that you have a contract in place dealing with things such as ownership of copyright, period for payment and arbitration in the event of a dispute."

Don't believe your hype

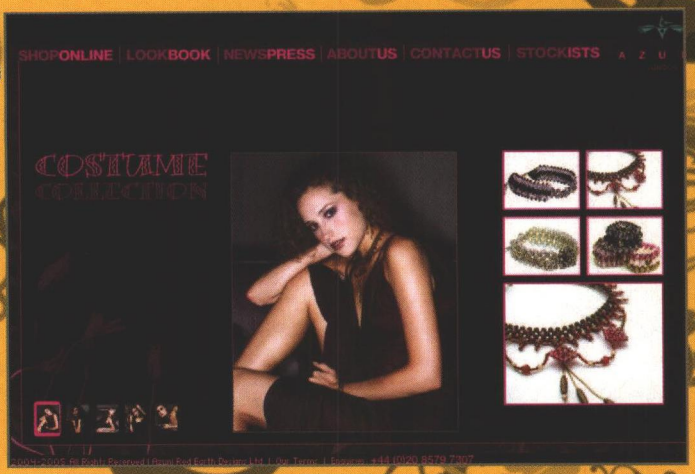
Managing client expectations is entirely your responsibility and it will land you with endless hassle if you don't handle it professionally. Unreasonable deadlines, all-nighters and a disgruntled client are all outcomes of an overly ambitious idea. "Always consider how much time something will really take to achieve. Then, if you're a designer, double it because you've probably underestimated," advises East. "Ensure the client knows that any photography, music, or fonts may cost extra and make sure they are happy with that before you even start designing. If they aren't, perhaps you need to re-appraise your design solution."

Andrew Brown, creative director of Swamp, says his team takes steps to prevent wasting time either for the client or the designers. "We create mood boards before designs, so that we're not wasting the client's money designing in directions which aren't the route they want to go. Mood boards allow you to discuss design ideas without spending time, energy, and money putting together finished designs. They can also be invaluable in briefing the designer."

Throughout all this time you'll be concerned with selling your work. "The key is to sell the client on a great idea – and share an understanding of exactly why it's a good concept," says Michael Berthon. "Clients often get distracted by detail – but at least you can remind them of the vision you shared at the outset and try and keep their eyes on the big picture. It sounds so easy, but all too often the final sign-off on a project lies, not with the immediate client, but a senior, board-level colleague who may not have even read the brief, let alone contributed to it."

And this can lead to some awkward situations, says Berthon: "On one memorable occasion it turned out that an MD I was presenting to, after three months of development, didn't even know their subordinate colleague – my client – had instigated a rebrand."

Alec East advises that at the start of any project, you should always establish sign-off stages for



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On-IDLE MD Ané-Mari Peter on client horror stories

SOME CREATIVES DO 'AVE 'EM...

"Financial clients are the worst. Because they tend to pay well, they have an ownership thing going on. I have one case where we have gone through 19 interface designs – seriously. Every time after sign-off. This client somehow ignores their own requirements and their own sign-off. Did I mention they had changed the basic brief three times, including the entire company branding?

"I had to stand up to the client and the entire management board. I wrote a formal letter to the management board explaining the processes the project has gone through to date, highlighting sign-off points that were then redressed. The outcome of the letter was a choice – accept the version, start from scratch, or stop the project, with the inevitable financial implications. I then scheduled a phone conference with all parties. I felt that it would be too personal to have a face-to-face with 'them' against 'me'.

"The client finally accepted a previous version, canned the last couple, and soft-launched a month ago. I really kick myself that it took me so long to stand up to the client."

Despite the stresses, On-IDLE has produced interactive content for the likes of (clockwise from top left) Azuni jewellry, luxury sports car Web site Elite-Sportswagon, and The New West End Company.

THE ONLY REASON FOR CLIENT MELTDOWN IS MISMANAGEMENT OF THEIR EXPECTATIONS

deliverables. "This makes our life much easier and keeps the client in the loop with the minimum number of surprises," he says. "We will usually show visuals online throughout the design process but the sign-offs may be tied to payment too, so it's worth meeting the client to ensure they are happy."

Relationships with clients differ enormously from client to client, so you'll have to play it by ear and keep your wits about you. "Ultimately it's a relationship, and transparency, professionalism, and mutual respect are essential if it's to grow," says East.

Ané-Marie Peter feels that it is best to be open, honest, and willing to recognize genuine problems and concerns. "Say if you think something works well and why and also if it doesn't," she says. It builds trust and allows you to be proactive with ideas without frightening the client."

Damage limitation

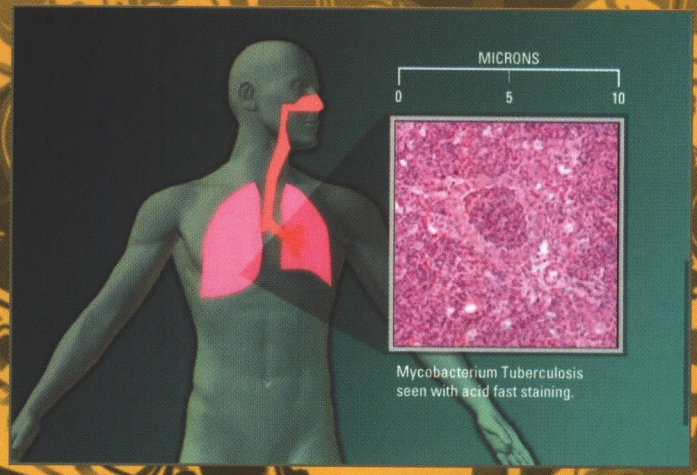
What do you do when it all goes wrong? "The only reason for client meltdown is mismanagement of expectation, either by the design company to the client, or internally at the client's office between different layers of management," says Michael Berthon. "In the former case then the design company has to accept responsibility and sort it out. If there are internal communication issues at the client offices then you have to work with your contact to provide solutions and work out how they are going to budget for this."

Legal advisor, Simon Halberstam, can elaborate. "Under the Supply of Goods and Services Act, the supplier (i.e. you) is obliged to provide the services with reasonable care and skill," he says. "The trouble in the creative setting is that this can often be a matter of opinion. It's better to talk through the points of difference rather than for either side to threaten legal action." Halberstam says it's better to meet in a neutral setting and try to pragmatically sort out the problem. "If you have messed up, you'd be wise not to expressly admit it unless you are prepared to face the consequences. If there's still a major dispute, get professional advice."

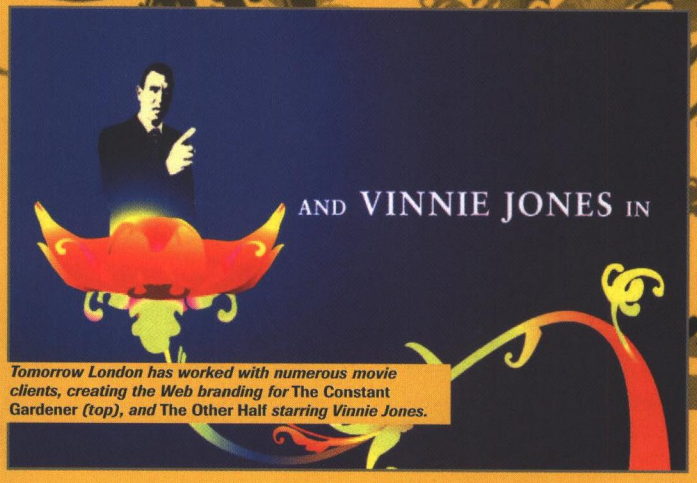
Another worst case scenario is if the client doesn't care for the work you produce. What happens if the client decides they hate your work and storms out of the meeting? "Check you have carried out exactly what they asked for. If not, why not?" advises Paul Rushforth, facilities co-ordinator/project manager at AHC. "This situation usually arises through a breakdown in communication. If this happens you have to work hard to rescue the job and restore confidence. If they must be, fingers should only be pointed after the job. Maintain honesty with the client, and remind everyone that the most important thing for everyone is that the job is finished, and that everyone leaves happy."

When the job is eventually completed, a debriefing process is vital, both for the client and for your creative team. Choose someone to act as a mediator and try to resolve the situation. Even if a job goes well, a "post mortem" is a good idea: "You can learn from success as well as mistakes," says Rushforth.

Sadly, there will be times when clients refuse to take your advice on



Mycobacterium Tuberculosis seen with acid fast staining.



Tomorrow London has worked with numerous movie clients, creating the Web branding for **The Constant Gardener** *(top), and* **The Other Half** *starring Vinnie Jones.*

STEPS TOWARDS HAPPY RELATIONSHIPS

- Everyone in the team should be encouraged to have a relationship with the client. Creativity isn't something you can schedule, so it's really worth encouraging an environment where, when an idea happens, there's someone you can talk it through with. Often the client is great in this role because they have a really good view of the market.
- Never presume to know your client's business better than they do, because you don't.
- If you establish sign-offs at various key design stages you will save yourself a lot of trouble and keep the client happy. You could link this to a payment schedule for a long project but primarily it allows you to make sure the client is satisfied with how the project is progressing and gives them a chance to make changes. Make the sign-offs relevant to logical stages of the design, so they don't affect the flow of work.
- Make sure that you can meet deadlines or face up to the client in good time with a good reason why you can't. Problems start when you spring surprises.
- Miscommunication is the biggest potential pitfall in client handing. Keep the client informed of everything – even the bad stuff. You can reason with a client that understands the situation.
- A good way to keep a difficult client under control is to set out the development steps at the start of the project and to refer them back to these as often as possible. Difficult clients are after progress, and are short of time.
- Many creative types will dismiss client ideas as unimaginative, but all ideas should be explored to the full for any merit.
- Avoid people who say money is no object. It usually means they don't know where the money to pay for it is coming from.

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RIGHT FROM THE START YOU HAVE TO BE CAREFUL WHEN HANDLING CLIENTS – IF IT WASN'T FOR THEM, YOU'D HAVE TO GET A BORING JOB

creative matters. "The client knows what they want, but it may be your creative can offer something better," says Victor Riva, senior editor at AHC. "It's always better if the client has come up with the idea, even if the creative has to convince them of this. Encouraging a client towards your path of thinking will allow them to 'have' your idea on their own. This will strengthen your relationship, as clients will feel that they always leave with a better product than they expected, and see that the creative process evolved out of teamwork."

Bullish clients are common, but it's not always the case. "Sure, there are some nightmare clients out there, but too often designers blame clients for spoiling their work," says Michael Berthon. "A surly, 'designer knows best' stance only aggravates clients and closes their eyes to potentially great ideas. Good client-handling and diplomacy skills can often clear the way for outstanding creative work. On the flip side, it's always amazed me how much time and money clients spend selecting top-flight creative partners only to dictate to them exactly what the creative solution is going to be. If they've got no intention of engaging the creative talents of the company they've commissioned, they'd be better off sketching their ideas on the back of an envelope and hiring a good artworker."

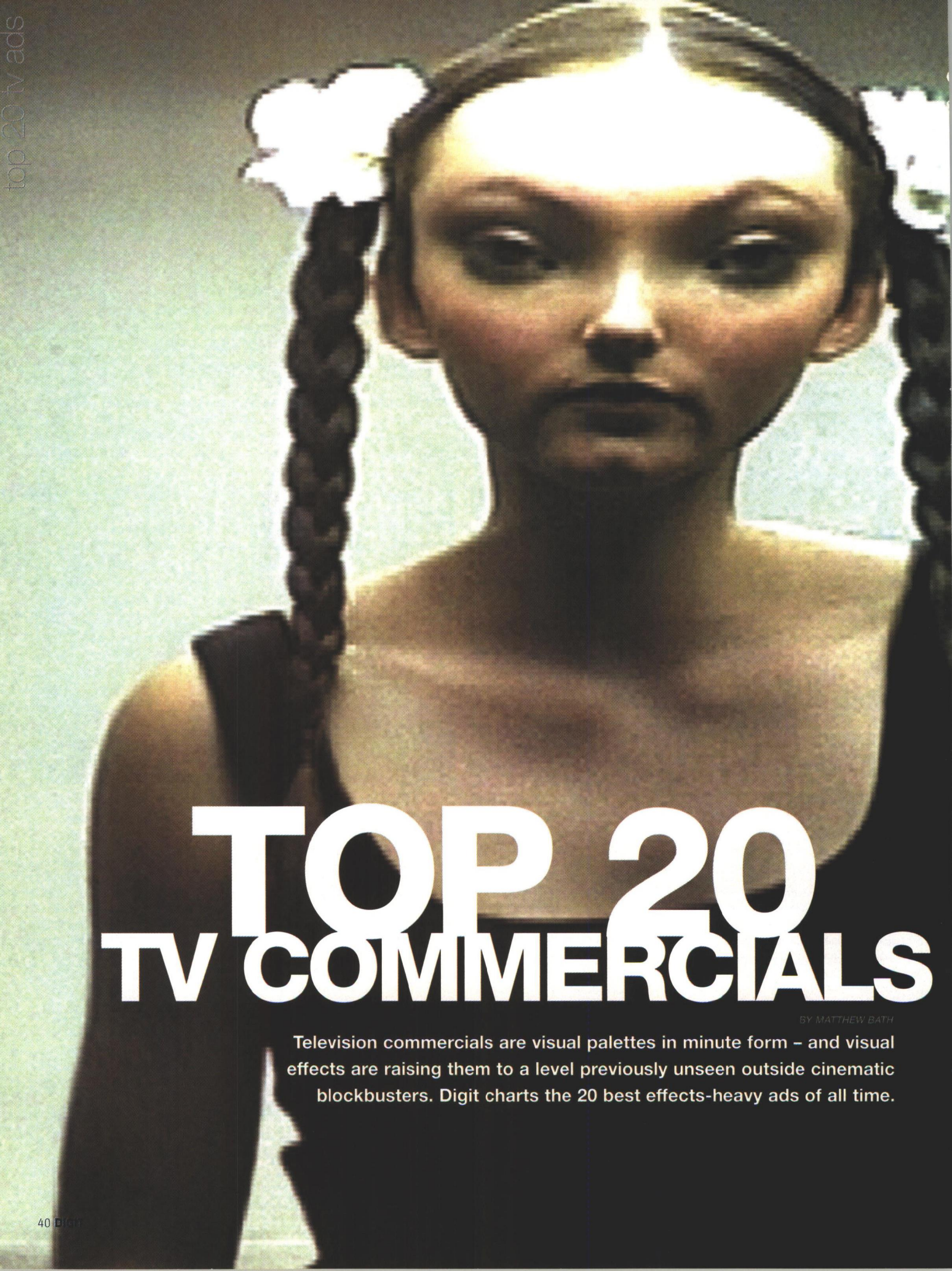
Brainwash

According to Ané-Mari Peter, there are ways of influencing a client into thinking just like you. "At the first presentation of creative ideas, you will get a feel for what they are after. Always ask for URLs they admire beforehand to get a sense of personality and personal dislikes. Also, request corporate literature or brand guidelines if they have them, so that you can justify your choices and make sure that you stick to guidelines.

"When you present creative, give two to three options, not more. You will either start from scratch, or one concept will emerge as the strongest and developed. Always put your personal favourite first or last – the client remembers this more clearly to those in the middle, but last is better as clients will hesitate to pick the first option in case they 'miss something'."

The client has come to you for creative input and output, so you have to find a way of meeting their needs without being pushed into their way of thinking. Some clients just aren't ready for the daring ideas creatives come up with. "Admittedly, we can be a bit too scary for some clients, who may think they are ready for a brave idea, but bottle-out at the last minute," says Alec East. "One-such client was recently overheard in a restaurant, damning us for insisting on taking a particular design stance, a stance that lost us that job. The client was busily condemning our concept for being too different to that of his competition. It's ironic, because that is exactly the kind of praise we strive for."

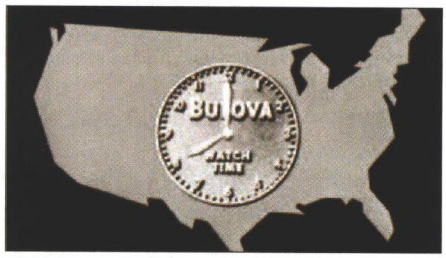
The big question is whether or not it's possible to retain creative integrity when dealing with clients. "Creative integrity is quite a loaded concept – particularly for graphic and interface design," says Ané-Mari Peter. "You can only be as creatively daring as the client will allow. Any designer will say 'no' to a client at some point and this is really important. Clients test the limits too, as they should. As a project manager, I have to be able to trust my creatives' judgment. If they are not going to 'stand up' to clients I cannot protect their ideas and we will end up with work that I can't put in our portfolio – this I do not want. Self-belief is more integral to creative integrity than client demands." ■



TOP 20 TV COMMERCIALS

BY MATTHEW BATH

Television commercials are visual palettes in minute form – and visual effects are raising them to a level previously unseen outside cinematic blockbusters. Digit charts the 20 best effects-heavy ads of all time.



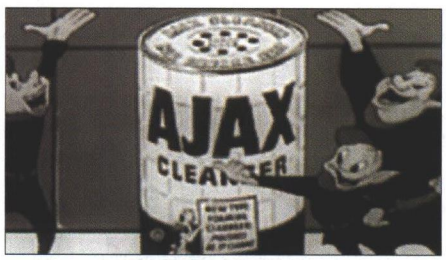
BULOVA: 1941

Commercials kicked off in 1941, and the first to air appeared on NBC (then known as WNBT-TV) on July 1. Amazingly, not only did Bulova earn kudos for making the first commercial, the watch-manufacturer's ad actually used special effects. The ten-second spot, which appeared before a game between the Brooklyn Dodgers and Philadelphia Phillies, featured an animated clock superimposed over a map of the United States, while a voiceover announced: "America runs on Bulova time". The commercial wasn't the only first for Bulova – it broadcast the first radio ad in the world, and was the first company to sponsor a TV show. The 1941 TV commercial cost Bulova a mere $10, including production and fees for the commercial spot.

BOTANY MILLS: 1941

Director: *Otto Messmer* **Production:** *Douglas Leigh*

Bulova opened the floodgates with its first commercial broadcast, and soon every eager capitalist was eyeing the potential of TV – even though there were only 5,000 TV sets across the US at the time. Following on from Bulova's VFX commercial, Botany Mills was responsible for the first animated commercial, which aired from September. Created to promote Botany Mills ties (and also forecast the weather), the animated Botany Lamb featured in seven spots and carried on until 1948. In each spot, the lamb first promoted the company's line of wool ties and then looked into a telescope to predict the next day's weather. The forecast appeared in white letters over the black lens of the telescope: different endings were made that said fair, warmer, windy, cooler, and so on. Interestingly, the commercials were animated and directed by Otto Messmer, the creator of *Felix the Cat*.



AJAX: 1947

Production: *Shamus Culhane Productions*

Animated commercials hit their stride in 1947 with the release of the Ajax Elves. These little characters went on to become popular icons. The fully animated commercial was a first in that it also pulled together big names from the animation industry – the start of a trend that would see famous directors try their hand at ads over the following decades. The talent roll-call for the Ajax Elves commercial included animation by Grim Natwick (the creator of Betty Boop and the animator behind *Snow White*) and Art Babbit (the animator behind Disney's Goofy). Babbit went on to win over 80 awards for commercials up to the 1960s, including gongs for the Ajax Elves. Remarkably, Babbit and Walt Disney apparently almost came to physical blows when Babbit led an animators strike that almost ruined the Disney studios.

IBM: 1967

The birth of CG in commercials was a quiet affair, being a spot for IBM's typewriter business – ironic, seeing as how computers quickly displaced the typewriter. The commercial, which saw 3D letters zoom out of an office machine, was created by industry legends MAGI, which was responsible for the birth of ray-tracing in 3D. MAGI, which had formed in 1966, had previously created a solids modeller that, when matched with its raytracing technology, could create high-quality images. That, and the tie-in with IBM, meant that CG-based advertising was born. MAGI went on to create most of the CG work for Disney's *Tron* movie, including the memorable light cycle sequence.

APPLE: 1983

Agency: *Chiat/Day* **Director:** *Ridley Scott*

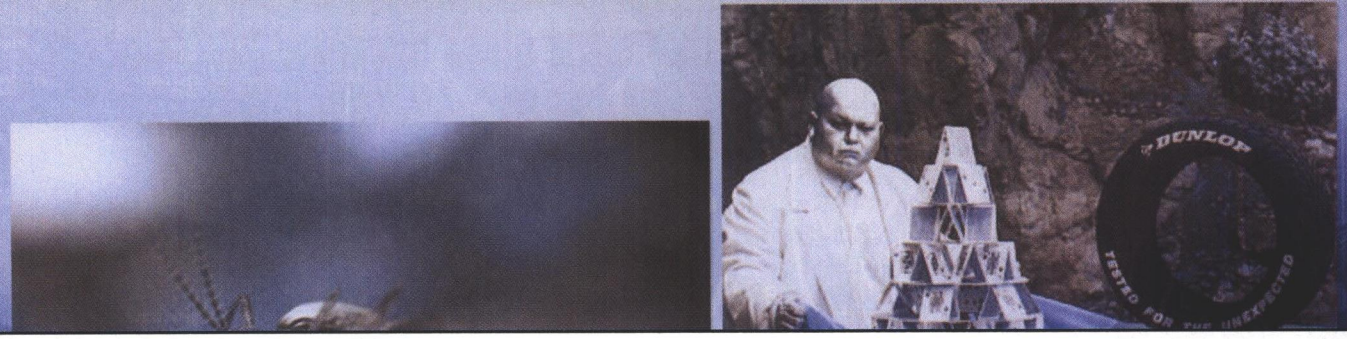
Hailed in some quarters as the greatest ad ever made, Apple's *1984* commercial blended all the creative ingredients to superb effect. The 60-second spot is a checklist of perfection: a top director (Ridley Scott); top creative director (Lee Clow, who also created the Energizer bunny); a massive budget ($900,000); lashings of effects; and later parody (in the animated series *Futurama*). The commercial shows a woman running through a dystopian *Blade Runner*-style landscape, and throwing a large sledgehammer through a *Big Brother*-esque screen. Brilliantly, the ad is swamped with controversy: initially, Apple hated Scott's efforts and tried to sell their Superbowl ad spot. The company couldn't shift the slot, so ran the ad anyway. The ensuing media frenzy it generated meant it reached half of all US households. It started the annual Superbowl commercial trend. Most people think the ad only aired once – actually, it aired twice. The second showing was at 1am on December 15, 1983, on the small-town TV station KMVT in Twin Falls. The reason? A second showing was needed to qualify it for the 1983 advertising awards. In 2004, to celebrate the Macintosh's 20th anniversary, Apple released a modified version of the commercial, in which the heroine sports an iPod.

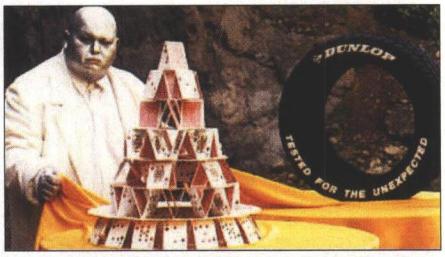
ELECTRICITY BOARD: 1991

Director: *Nick Park*
Production: *Aardman Animation*

The first truly successful stopmotion TV ad, the Electricity Board's *Creature Comfort* commercials proved a revelation – ditching brash effects in favour of claymation, and dragging the UK's Aardman Animation into the commercial limelight.

The homely series with a Heat Electric tagline are based on Aardman director Nick Park's 1989 animated short *Creature Comforts*, which scooped an Oscar in 1990. The commercials feature plasticine animation and unscripted voices from a wide range of British people, talking about aspects of their lives (and keeping warm). The original short film featured interviews with residents on a housing development, which Park used as the voices of a collection of zoo animals. The commercials feature domestic pets instead, and the ads were remade as a TV series in 2003. The voice-over at the end of the Heat Electric commercials is children's TV favourite Johnny Morris.





DUNLOP: 1993 ▲

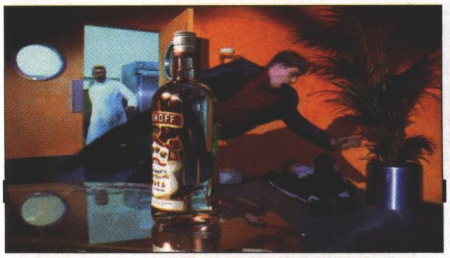
Agency: *Abbot Mead Vickers BBDO*
Director: *Tony Kaye* **Production:** *Tony Kaye Films*
Jaw-dropping for its time, this spot mixed fetish imagery with an astounding soundtrack, and redefined car advertising. Directed by Tony Kaye, the spot, called *Tested For The Unexpected*, gained some notoriety due to Kaye staging a very public sitting protest in a vain bid to get the Dunlop spot exhibited at the Tate gallery.

VOLVO: 1995 ▲

Agency: *Abbot Mead Vickers BBDO* **Director:** *Tony Kaye*
Twister meets car advert, and to stunning effect. The blockbuster commercial showed a Volvo driver heading into the heart of a tornado, while around him houses imploded and lorries were hurled through the sky. Interestingly, the CG is extremely light in the ad – which was again directed by Tony Kaye, and scooped a wealth of awards. The tornado was generated by a custom-built rig made from a modified helicopter rotor and two jet engines, producing over 70mph winds. The star of the commercial is Gene Rhoden, a real-life tornado chaser. Coal dust was used to create a dark and menacing vortex, even though that made for an explosion risk. And film director Steven Spielberg was so impressed, he is reputed to have ditched CG-tornados in favour of a similar machine.

KELLOGG'S: 1996 ▲

This ad makes it into the best of list because it is a pathfinder in the truest sense. Designed to promote the Frosties breakfast cereal, it aired on Videtron in 1996 and was the first interactive advert broadcast. Aimed at children, it allowed the viewer to select different scenarios at various stages during the ad, and used a cartoon Tony the Tiger to tell a surfing story that ended with a beach party and the actors scoffing Frosties. Cleverly, if the viewer didn't participate, Tony would plead with them to press a button – and if the viewer still refused, the scene changed to a fish tank with slow music. The ad was accompanied with audience tests measuring eye movements of viewers and the number of times buttons were pressed.



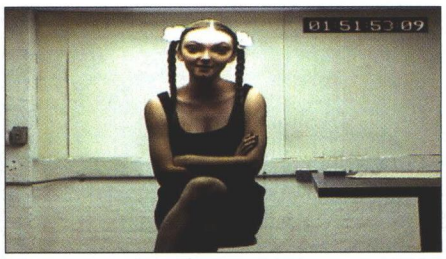
SMIRNOFF: 1998 ▲

Agency: *Lowe Howard-Spink* **Director:** *Michel Gondry*
Post production: *The Mill*
One of the most visually striking ads of all time, Gondry's *Smorienberg* commercial for Smirnoff has been single-handedly responsible for starting entire genres of effects. The spot condenses one astounding, mixed-bag action film into 70 seconds, with the bottle of Smirnoff causing scene shifts. Gondry invented this technique, which is now known as 'virtual camera'. Each scene change uses elements from the previous shot – such as a person's head becoming a spaceship. However, the ad is most notable as the first use of 'bullet time', made popular with *The Matrix* trilogy of movies, where hundreds of stills cameras take images around a scene in quick succession and are played back as film. Other Gondry signature pieces include his familiar background projection technique. The ad is referenced in the Spike Jonze movie *Being John Malkovich* in the chase sequence though Malkovich's subconscious.

FORD: 1997

Production: *Streetlight*
Director: *Paul Street*
Post production: *Rushes*

One of the coolest ads to make the list, Street's commercial reworked the famous chase scenes from the Steve McQueen film *Bullitt*, but cleverly swapped the original's 1968 Fastback Mustang motor with the then new Ford Puma. The commercial demanded a five-day shoot in San Francisco that replicated the scenes from the movie that were being recreated. It took around ten days for Flame artist Verdi Sevenhuysen to finish up. "Everything was in the preparation," says Sevenhuysen. "I had a physical cut before I went out there – there are not many angles in car spots, so it was not difficult." Bonus fact: Warner Brothers was understandably reluctant to release the original *Bullitt* negative, but ended up supplying a neutral transfer for PAL D1.



SONY: 1999

Agency: *TBWA* **Director:** *Chris Cunningham*
Post production: *The Mill*

Bizarre is one word to describe this commercial, which is both incredibly low-tech (it was shot using a Sony DV camera) and really high-tech, due to the uncomfortable alien-like facial effects applied to the actress, Fiona Maclean. Filmed straight-to-camera, Maclean plays Fi-Fi. We're not sure what she's supposed to be – but it's weird. The Mill's Flame operator Barnsley designed the look of Fi-Fi over two days, digitally pulling her eyes apart, shrinking her nose, and squashing her mouth. Her body was stretched as well – and then the whole process tracked to the 40-second spot, which took a week. Billed as the best lo-fi commercial ever, it scooped a 2000 D&AD Award, among others. Barnsley says: "The real challenge we faced was making the actress look weird, but believable. Slightly unreal but not obviously or visibly altered by special effects. TBWA wanted viewers to question her existence."

ORANGE: 2000

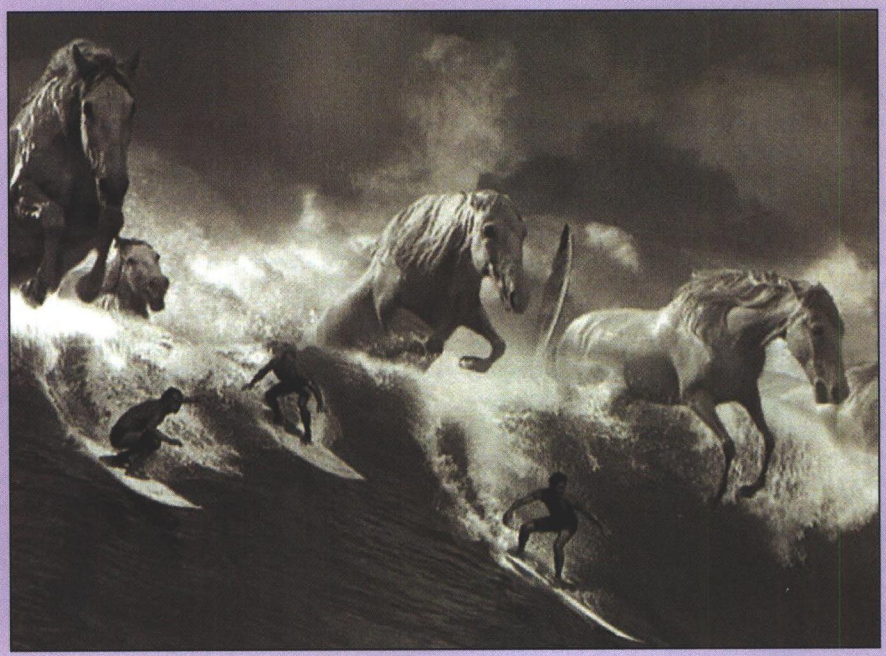
Agency: *WCRS* **Director:** *Chris Palmer*
Post production: *Smoke & Mirrors*

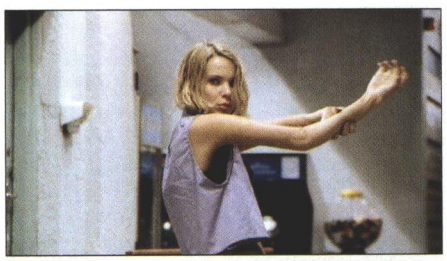
Hold Up, for Orange, features an intense bar-top car chase – with slow pans on clean-cut barflies merging with frenzied shots of the hair-raising action as the vehicles swerve around various bar-top obstacles. Fifty-seven out of 60 shots required compositing, so careful pre-planning and solid shoot co-ordination was essential. First, the car chase was shot on a black background with a floor that matched the bar counter, while model cars were separately dragged through the bar to assist in plotting reflections in the pint glasses. Parts of the real cars were composited in the final phase. The result is that the spot looks as if it was created in-camera, thanks to ultra-sharp shooting and de-focusing effects added in postproduction, plus depth-of-field and motion-blur effects.

GUINNESS: 1999

Director: *Jonathan Glazer*
Post production: *Framestore CFC*

Take away the fact that *Surfer* is a Guinness ad, and you are left with an astounding piece of cinematography. As a commercial, it's yet to be bettered – and gets Digit's vote as the greatest ad ever made. The ad features surfers waiting for the next big wave. When it arrives, it is brought to life with the addition of giant horses and pounding hoofs, creating a spot on an epic scale. The idea is based on the wait of 119.5 seconds to pour the perfect pint of Guinness. Framestore used real waves and horses, adding CG water effects and the occasional CG horse leg. CG elements were created using Houdini, Maya, and Renderman. The film crew met the stars of the commercial – real surfers from Hawaii – while setting up the shoot, and also got lucky with the beach getting record waves while filming. The voice-over, spoken by Louis Mells, is made of passages from *Moby Dick*, detailing Captain Ahab's search for the white whale.

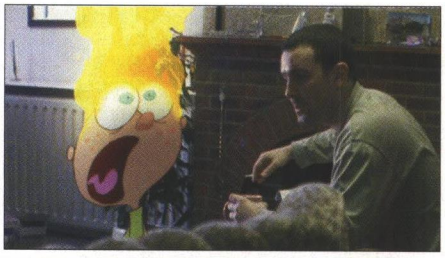




LEVI'S: 2002

Agency: *Bartle Bogle Hegarty* **Director:** *Frank Budgen*
Post production: *The Mill*

At its core the Levi's *Twist* TV ad is a simple manifestation of the product: twisted denim cut to fit like a second skin. Technically speaking, it's incredibly complex, with hours of expensive post-production necessary to make the special effects seamless. In the ad, a car pulls up at a roadside diner. A group of friends get out, stretch, and unwind – literally. Limbs rotate, torsos twist, a tapping foot goes round in a 360-degree circle, heads spin and are swapped. Naturally, the protagonists are all wearing twisted jeans. The effects were created with Softimage|3D, with limbs modelled in 3D and based on the live action. Rotoscoping, texturing, and lighting tricks were required to create the bizarre effects – with special attention given to Mental Ray, which used real-life scene lighting to render the models so they integrated seamlessly. The spot was then lightly graded.



NSPCC: 2002 ▲

Agency: *Saatchi and Saatchi* **Director:** *Frank Budgen*
Post production (animation): *Passion Pictures*

Billed as the best commercial in 2003, this hard-hitting, powerful ad mixed old-school animation with live action to generate a level of shock that is rare in advertising. The spot won a gold at Cannes and the Silver D&AD. Passion used cel-style animation to show an abusive father-son relationship. The spot ends with the cartoon boy turning into a real one, with the tag: "In real life kids don't bounce back." Passion's visual effects supervisor Chris Knott used a life-size cut-out of the child character to help compose the shots together with various manipulation rigs to give the actor a sense of the weight of the cartoon child and an idea of an eyeline. The animation was drawn over rotostats, which are printouts of each frame of the shoot and which enable the proper registration of the character in the live action film.

MICROSOFT: 2003 ▲

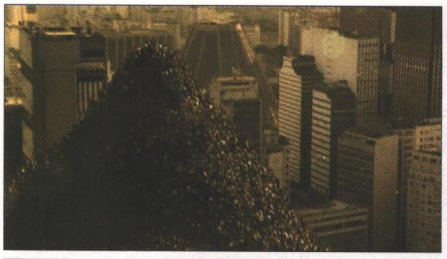
Agency: *Bartle Bogle Hegarty*
Post production: *Framestore CFC*

Microsoft's *Mosquito* is an epic commercial – ushering in the launch of the Xbox – and recreating the sweep of civilisation in a mere 30 seconds using a cast of thousands of CG mosquitos. It shows the mosquitos creating beautiful music, before succumbing to the need for a job as bloodsuckers, and their fall from grace. Aside from the story, the ad sports some astounding CG work, with almost every shot containing digital mosquitos – created using Maya, and tracked using 2d3's Boujou. The various animals and birds, which were supplied as stock footage, were all placed on new backgrounds in Inferno. These backgrounds are all artificial, in that they consist of a variety of shot elements which were composited together to provide a unified feel to the shots. The project took three months to create, with ten 3D artists and three 2D artists working full-time.

JOHNNIE WALKER: 2003 ▲

Agency: *Bartle Bogle Hegarty* **Director:** *Daniel Kleinman*
Post production: *Framestore CFC*

Fish reveals an oceanscape of what, at first glance, seem to be flying fish skimming over the surface. As the camera moves closer, the fish turn out to be humans. The multi-award-winning commercial for Johnnie Walker whiskey was created using Maya and MEL scripting. The challenge was to handle large shoals of unique swimmers – up to 100 in some shots. A character sheet divided the swimming types in different styles, and a 'random people generator' was created to make subtly different CG models.



SONY: 2003 ▲

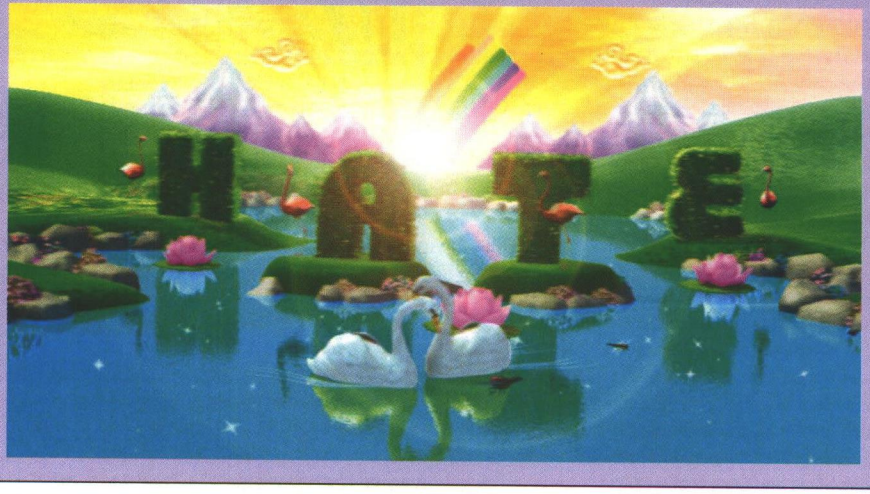
Agency: *TBWA* **Director:** *Frank Budgen*
Post production: *The Mill*

The Mill teamed up director Budgen in a collaboration that was to see The Mill scoop gong after gong for its astounding CG crowd work. The commercial shows a huge crowd building a human mountain in the heart of Rio. The spot is notable as it was the first time that Massive – a crowd-simulation software – had been used outside of the movie *The Lord Of The Rings*. From a cast of 500, The Mill recreated a digital CG crowd of 146,000 – each imbued with their own AI so that no behaviour is replicated in the crowd.

HONDA: 2004

Agency: *Wieden + Kennedy*
Director: *Smith and Foulkes*
Post production: *Nexus Productions*

Honda's *Grrr* has been a barnstorming success, winning every award going (including a Gold D&AD, Cannes Lion, and four BTAA awards). It's a brightly coloured CG animation that debuts Honda's first diesel engine. It was inspired by Honda's chief engine designer, Kenichi Nagahiro, who hated diesels so much that for years he refused to design one. *Grrr* depicts a beautiful CG world of hate that is populated by fluffy rabbits, penguins, and flamingos. The team used 3DS Max and Brazil r/s to render the landscape, blending all kinds of animation styles. It generated massive press coverage and is even being used as a teaching aid in drug rehabilitation clinics where the idea of using hate as a positive force to improve lives is particularly relevant. The *Grrr* song was written, performed and whistled by the Wieden + Kennedy writers; Micael Russoff, Sean Thompson and Richard Russell, under the name Be Nice to the Pigeons.



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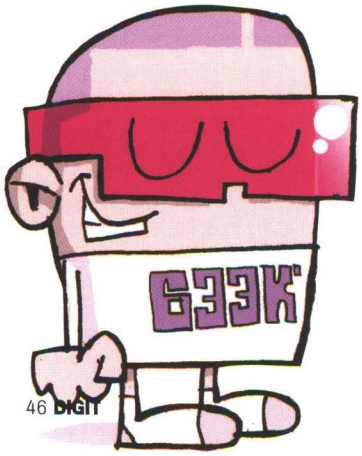
Sci Fi UK's Geek Boy

Developed by onedotzero industries in partnerships with unit9 and Jake, the mascot for the Sci Fi channel, Geek Boy takes to the air in four adventures.

By Lynn Wright

project	geek boy
client	sci fi uk channel
director	jake
creative director	shane walter, onedotzero
producer	yates buckley, unit9
character design	jake
lead animator	jimeno farfan
assistant animators	alex jenkins, tom baker
sound design	steve nolan
head of copy	dan radley



Geek Boy is the new animated mascot for the Sci Fi channel. Designed to bring the channel's brand values to life, he appears in four humourous 60-second animations prior to the Sci Fi's 'Movie at 10' slot. Geek Boy is an unfortunate young man who, along with his sidekick pal 3000, has regularly run-ins with some scary sci-fi characters including Darth Vader, The Terminator, and Alien.

Created in Flash, Geek Boy was produced by onedotzero industries in collaboration with unit9 and director/illustrator Jake. Sister company and production arm of the international festival and DVD organization onedotzero, the recently formed onedotzero industries is a production company with a difference.

"We're not a production company in the traditional sense as we don't represent directors," explains creative director and producer of Geek Boy, Shane Walter. "In fact, we are keen to work with other production companies, as we're not about competing with what they do so well."

Nevertheless, onedotzero industries landed the Geek Boy gig after a traditional pitching process having been invited to do so by Glynn Ryland of Sci Fi UK. "We approached the pitch as a work in progress, to show our thinking and that we wanted a collaborative partnership to get this right," says Walter. "So we did a pitch in the traditional sense and showed all the work we had done and then told them to ignore it and presented it the way we think we should go."

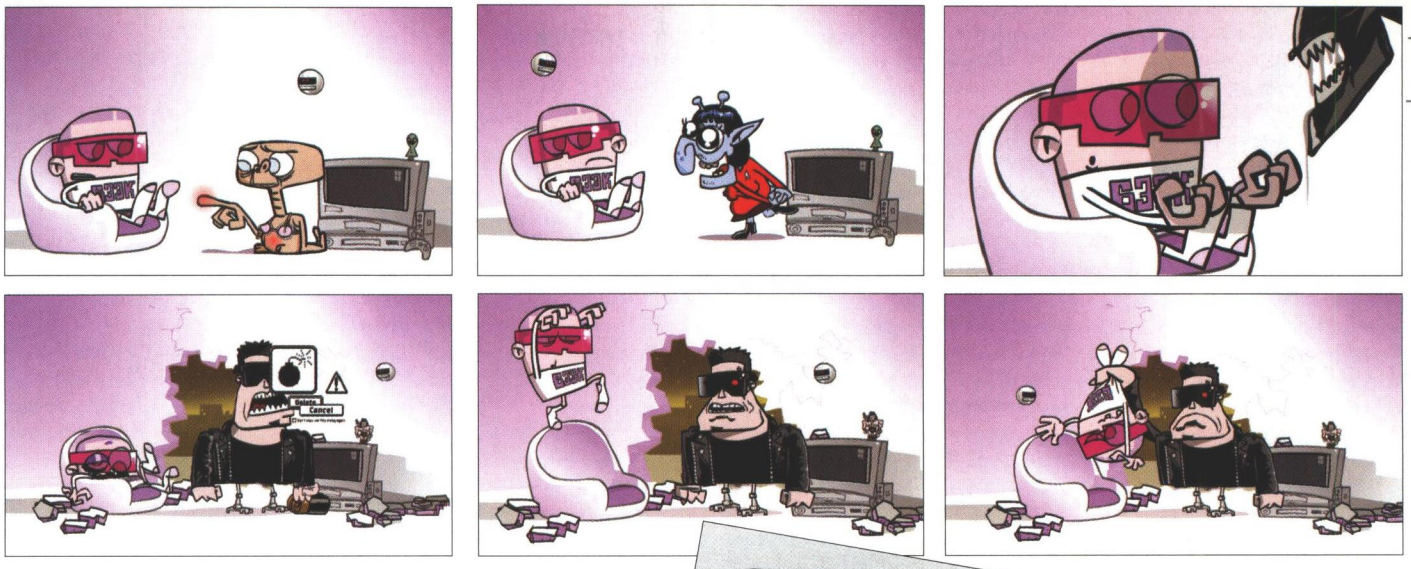
Walter was keen to assemble a strong team to work on the project and be able to think beyond the initial brief for the character. "I wanted people to think bigger about what the character could become and be more ambitious about it," he says. Rather than merely look for an animation director, a writer and a character designer, Walter wanted a project leader with a strong vision to steer the project, which he found in character designer Jake.

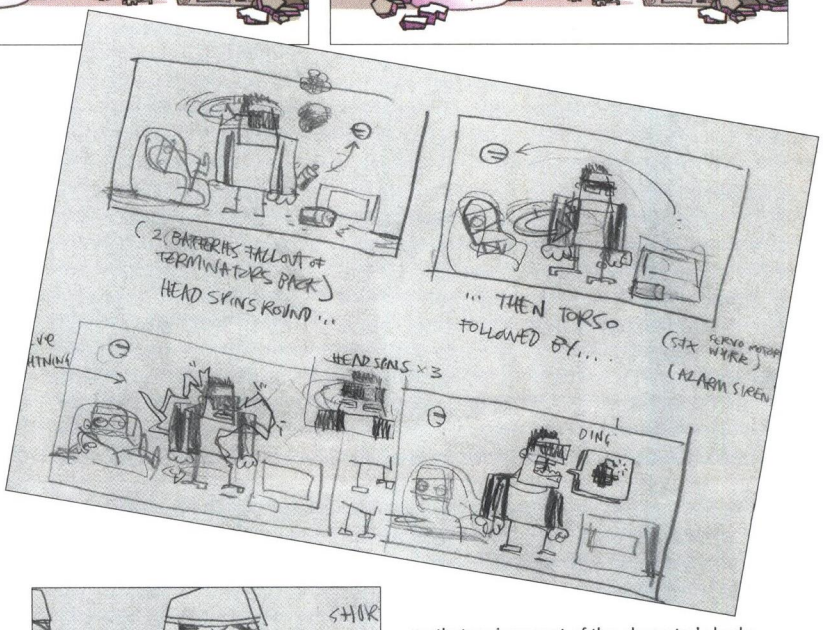
"Jake certainly filled the character design area and had great ideas for scripts and a real sense of who Geek Boy could be and an understanding of his world," he says. "He was the perfect choice and his limited animation experience was offset by a good team and his own strong ideas from watching far too much animation."

Perfect partners

As the original brief had many online elements and viral plans, Walter was also keen to partner with a company who not only had experience of animation but also an understanding of the online environment. Interactive agency and animation house unit9 fitted the bill, and its Flash animation specialist Yates Buckley was brought onboard as a producer.

"The opportunity to get involved with Geek Boy was great as we long wanted to work with with onedotzero industries," says Buckley. "It was important to have onedotzero literally





around the corner to periodically revise and distil what had been achieved before we shipped it all off to Sci Fi."

The biggest creative challenge for the team was developing the new character and managing expectations. "Everyone had an opinion on what Geek Boy should be like," says Walter. "So the challenge was to make sure everyone had input and good ideas were noted, but not create a character made by committee. It's also tough as everyone finds different things funny and you need to rise above your own personal humour and look for a new direction that could only be Geek Boy's."

In the end, it was Jake's clear vision that brought the character to life. Inspired by the science-fiction films of the 1960s and 1970s including *A Clockwork Orange*, *2001 - A Space Odyssey*, *THX 1138* and *Buck Rogers* film and TV series, Jake describes Geek Boy as "an abstraction of a sci-fi nerd, but he sits in his futuristic bri-nylon and socks all day."

"Jake's character design was unique, and had humour and depth without the need to speculate on more detail," adds Buckley. "The scripts he wrote were great and flowed easily out from the silly discussions we had about who the little pink-visored freak was. We certainly had some fun."

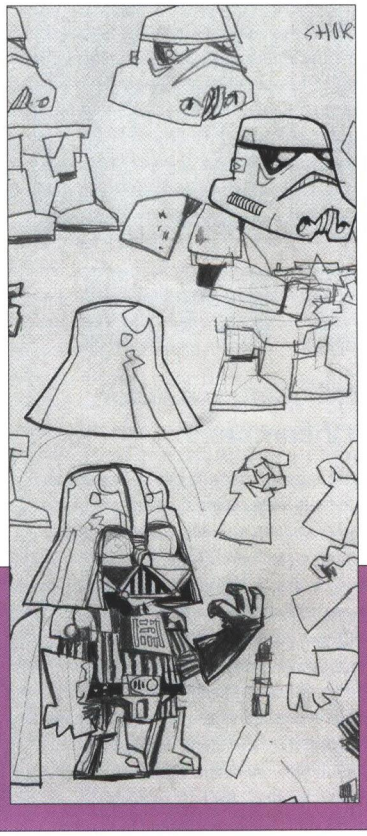
Character breakdown

The duo had the time to get under the skin of the Geek Boy character, pinpointing everything from his background, to his friends and the world he lives in, to the way he moves and speaks. Throughout this process, however, the humour of the animation pieces had to be kept paramount even though they struggled to incorporate the marketing and branding requirements that Sci Fi had for the character, says Buckley. "At the end of the day we realized that the struggle we went through with Sci Fi actually improved the character, but while we were doing the transformation, it was a bit painful," he says.

The pair planned the animations with an emphasis on simplicity, hoping that fewer elements would in turn allow them to concentrate on the humour. Working with storyboards and then animatics, Jake and Buckley created various versions of the animations, refining each one with more sound and graphic detail.

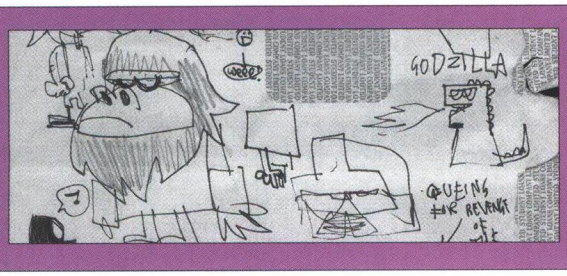
"Oddly what was funny in one iteration, often became less interesting the next, while some other feature would take over and make us giggle," recalls Buckley. "Deciding what you want to do and creating rough voice guidelines, then honing everything over and over is the most important strategy to achieving a good product with a tight deadline."

Animator Jimeno Farfan created Geek Boy as separate elements in Flash so that various part of the character's body and accessories such as his glasses could be moved independently to speed the animation process.

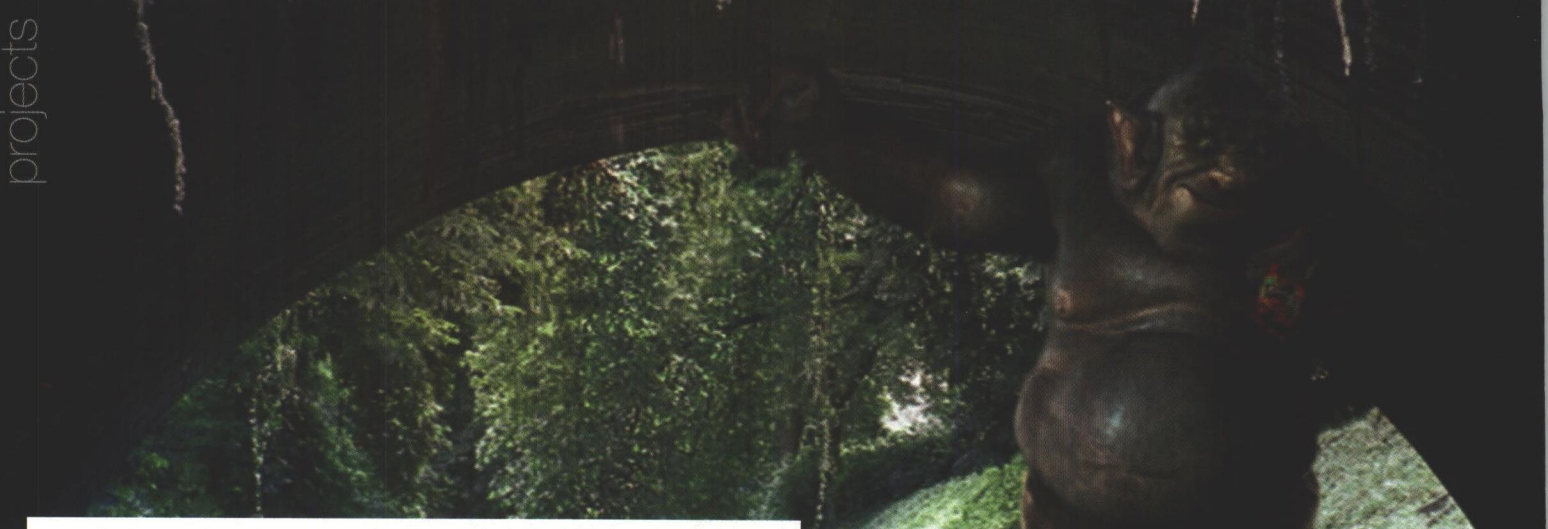


Apart from the odd masking bugs In Flash and pixelation problems in After Effects, the animation went smoothly recalls Buckley, although the team sacrificed more than a little sleep in the process.

"There was one point where Geek Boy walks down a neon-lit street, and I wanted one seamless shot where, as soon as he walks through his front door he is lit by street lamps," says Jake. "My lead animator, Jimeno Farfan, would just look at me sometimes as if to say 'In Flash? Do you know how long this is going to take me?' But I'm glad we worked hard on all the stupid details like that, I'm happy with the way it's animated."



"The team worked really well together and Jake really breathed life into the character with his vision and ability to sit inside Geek Boy's head," says onedotzero industries' creative director Shane Walter. "So much so we have not discovered how to get him out again yet!"



Maynard troll

MPC creates a fairytale CG troll using Maya for Maynards Wine Gums latest TV campaign.

MPC has created a CG troll that looks as if it has stepped from the pages of a fairytale, as part of its postproduction on a TV ad for Cadbury Trebor Bassett's Maynard brand. Directed by Harold Zwart of Upstart films, the spots sees our hero Gregor strolling beside a picturesque canal. As he passes under a bridge, a troll bursts from the water and blocks his path. "Feed me diamonds or feel my wrath!" the Troll demands, and then picks up Gregor, and holds him out over the water. Diamond-less, Gregor offers him his bag of Maynards Wine Gums. Enraptured by the sweets, the troll lets Gregor go on his way.

MPC's challenge was to create a believable but non-threatening troll that behaved in a naturalistic way. The creature was first modelled and textured in Maya using drawn and maquette references, before being rigged for animation. As several close-ups were needed, lots of attention was given to facial detail and the range of the character's expressions. The troll then was composited into the live action, and lipsync animation was refined for two shots. Secondary animation (for the wobble on his belly), lighting effects (translucency on his ears), and his loincloth were then added, before the shots were composited in Inferno.

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MotionFX adds

Invisible visual effects were the order of the day for Polanski's latest film, Dicken's classic *Oliver Twist.*

By Lynn Wright

London-based post production house MotionFX has just completed more than 180 visual-effects shots for Roman Polanski's new film *Oliver Twist.* Produced in Paris and filmed in Prague, the period feature film required predominantly invisible effects, including massive digital set extensions and sky replacement, which needed to be tracked and seamlessly blended with live-action footage.

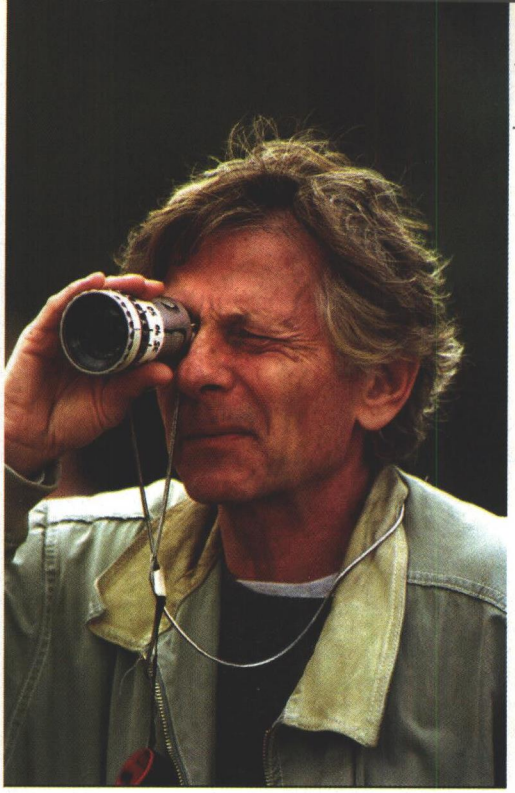
"The visual-effects requirements were challenging and varied, ranging from the big establishing shots that opened the film down to the smaller shots, with straightforward requirements such as removing elements of camera apparatus from in-frame, or adding further fog, or rain," explains Jonathan Cheetham, MotionFX's lead compositor.

Cheetham and Clare Heneghan, VFX co-ordinator for MotionFX, worked closely with the film's visual effects supervisors David Bush and Florian Gellinger from the start of the production.

For the large CG set extensions, David Bush decided to create a small CG modelling facility next to the art department in the Prague Barrandov studio lot. Here, the film's art team supervised the construction of the virtual sets in parallel to the principal shoot. Each single element on set was photographed with high-resolution digital stills cameras, and lighting and reflections captured using HDRI. These models and textures were then taken back to the facilities for compositing.

For the smaller set extensions, a number of models and textures were created in house. With no motion control, MotionFX performed extensive tracking of 2K plates and then created extensions in Eyeon Fusion, with elements being generated in 3D and Photoshop. For some shots, matte-paintings or 3D camera projection were sufficient, while for others, it was necessary to create digital environments and combine these with the live-action footage.

"For the latter we used our Thomson Viper camera filming in uncompressed log RGB 4:4:4 capturing additional elements such as trees, hedges, walls, hills, and sky plates. With these



OUR POSTPRODUCTION NEEDED TO MATCH THE LOOK POLANSKI HAD FOR FINAL FILM

JONATHAN CHEETHAM

artful effects to *Oliver Twist*

MotionFX
www.motionfx.com

elements we were able to quickly provide Roman Polanski with layout examples to compose the scenes," explains Heneghan. "Once all the necessary roto and garbage work was complete, grain was then added and matched to the original 35mm acquisition."

Particularly challenging for the MotionFX was the creation of 13 harbour shots, which see Bill Sykes struggling to kill his bulldog, Bullseye, against a backdrop of the London dock in the 1830s.

The team began by thoroughly researching the history of the London docks at this time, and travelling around the UK to shoot various ships of the period using the Viper camera.

"Using the digital stills, as well as matte paintings for additional dockside buildings, we tracked and composited these into 3D space to ensure there was correct parallax and depth of field between the ships, cranes, and foreground," says Cheetham.

"This proved very difficult to track, due to the live-action being a hand-held shot taken in overcast conditions, and the amount of movement there was in the foreground. Therefore multiple track passes were made plus a lot of rotoscoping and matting was necessary. We also had the additional task on this scene of adding a 3D chain within the foreground action which had to match with the textures and lighting within the scene," he explains.

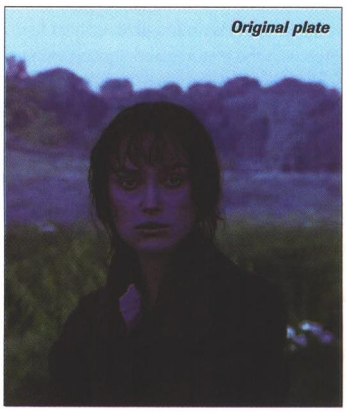
To meet the increased level of VFX required, MotionFX upgraded its network and servers adding more powerful processors, graphics cards and rendering capabilities. "We also needed to bring in further compositing seats as the effects shot lists grew, but because the company was founded on the ability to ramp up and down as needed, this was a pretty simple task," explains Heneghan. At its peak, the VFX pipeline consisted of 16 compositors working long shifts on 11 workstations, with the company's render farm running at capacity with 21 processors, she adds.

Final VFX plate

Pride & Prejudice's hidden vfx

A new reworking of the classic novel *Pride and Prejudice* uses over 400 vfx by Double Negative to recreate Georgian England's glory.

By Lynn Wright



Original plate

A film version of one of the beloved books of English literature – Jane Austen's classic novel *Pride and Prejudice* – isn't the most obvious of projects to land at the door of a top visual-effects house. Yet this period drama set in Georgian England features more than 400 visual-effects shots, courtesy of UK post house Double Negative. Fresh from working on films such as *Batman Begins*, *Kingdom of Heaven,* and *Harry Potter*, Double Negative was asked by *Pride & Prejudice*'s director Joe Wright, to help recreate an England from the early 19th Century in a way that was would be invisible to the audience. This included digital set extensions, replacements skies, and the removal of all modern-day elements that were unavoidable during filming.

The original brief was to use CG imagery to enhance the pivotal sequences in the film, explains John Moffatt, Double Negative's visual-effects supervisor. "We initially agreed to create a very stylized approach and created dramatic Turner-esque skies as backdrops. However, we eventually decided a more realistic approach would allow Joe the freedom to let the actors tell the tale in what is essentially a character-driven film," he adds. "The last thing we wanted was for the audience to be jolted from the realism of the story by a breathtaking but distracting visual effect."

The Double Negative team were on hand during every stage of the filming to advise the director as to the issues that could be solved in post production. This included altering lighting conditions after scenes had been filmed to ensure continuity. In one sequence, for example, Lizzie (Keira Knightly) and Darcy (Matthew McFadyen) become entangled in a romantic clinch just as the sun rises behind them. "While shooting, the lighting changed drastically, and we ended up in full daylight," says Moffat. "Rather than disrupting the filming to wait until the next morning, we changed the lighting of later shots to match the earlier footage, adding some CG mist and a new sky."

Lighting was an important factor in another pivotal scene which sees Lizzie set off in a carriage through the open countryside in the dead of night. The footage was taken overlooking a quarry pit and filmed in bright sunlight. Double Negative needed to replace the quarry and recreate a new landscape and stormy sky using a matte painting completed in Photoshop.

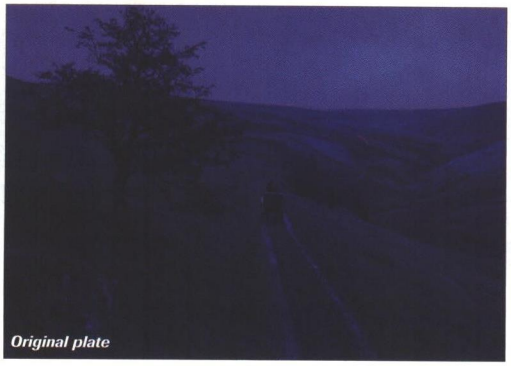
"The matte painting also had a new valley section incorporated into it, opening up the view into the distance, as well as a winding stream and small cottages that are lit from within by a small fire glow," explains Andy Taylor, CG supervisor at Double Negative. The whole sequence was then heavily graded to give a night-time look-&-feel.

For locations, the film has used some of England's finest country houses, including Chatsworth House, which doubled as Darcy's residence Pemberley. Double Negative was called upon to digitally restore these stately homes to their former glories, which in the case of Chatsworth was a sizeable task, says Taylor.

Going for gold

Gold-framed windows as they would have appeared in Austen's day were digitally added to the house's front. Taylor explains the process. First the house was masked from the footage and brightened to make it appear less aged. "The windows were then individually isolated so we could recreate lighting and reflections to simulate the look of the windows as they would have originally been," says Taylor.

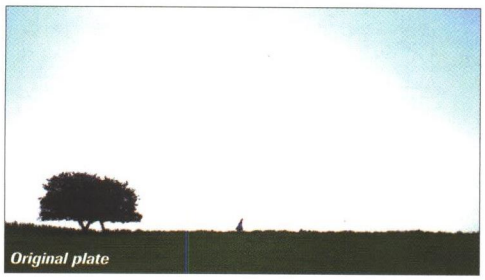
In addition, the house's modern-day window blinds had to be removed, which was done by creating a fake window that was positioned and tracked over the top of the offending windows. "A mixture of rotoscoping and keying was used for the foreground bushes to create a hold-out matte, allowing the foliage to pass in front of the new windows and enhanced window frames," says Taylor. "The final touch for this shot was a


Original plate

Final VFX plate

THE LAST THING WE WANTED WAS FOR THE AUDIENCE TO BE JOLTED BY TOO OBVIOUS AN EFFECT

JOHN MOFFAT


Original plate

Final VFX plate

new matte painted sky to match the new lighting conditions of the gold."

A patio vastly overgrown with weeds is something you would expect the production team and a couple of gardeners to deal with. However, as the owner of Chatsworth, the Duke of Devonshire, had a particular fondness for the weeds because of their flowers, and objected to their removal, 2D and 3D fakery was called into play.

A 3D patio was created that covered the entire area, including a gravel section that's visible at the start of the shot on the right-hand side and the wall by the steps that also had weeds. Textures for the patio were lifted from the original photography, so the old and 3D patio matched.

"For the large weed section of the patio, we created individual mattes for the weeds and opted for pulling new sections of patio through and hiding the weeds," says Taylor. "Shadows were added when the actors walked over the new sections as this allowed the actors to be more grounded on the patio."

The shot also involved enhancing the sky with a matte painting and adding a part of a forest that would have been originally present around the house.

According to Taylor, one of the hardest shots the team worked on was a night sequence filmed at the Bennett family's house. This was because the director wanted to be able to track through Lizzie's bedroom and out into the night beyond the window, he explains.

The bedroom window was removed from the house, and black drape that was blocking out the daylight was positioned outside the window with tracking markers on it. A remote camera had to be used for the shot, as there was a limited amount of space in the bedroom, but the camera swayed as it tracked out of the room and arrived at the window at an angle, recalls Taylor. Once the shot was tracked in 3D and a new camera move added, the drift was removed.

The glass in the windows also required matching to other glass seen in the film. "Old glass has distortion and air pockets within it and flakes of old paint around the edges that modern glass does not have," explains Taylor. "The shader for the glass took several weeks to generate, in order to give each of the panes a slightly different feel, while maintaining the look of old glass. A reflection pass was shot during the shoot, which provided the matching reflections for the glass."

The window frame was created from a photo and measurements taken from the location and re-created in Maya. The background was a layered matte painting allowing for parallax to happen as the camera moves and tilts up and a tree added from another shot.

In total, Double Negative worked on the film for six months, although most of the effects were created in the final two months, says Taylor, after a number of test screenings.

"It was great to work with Joe on this film, as it was a collaborative one and so many extra ideas were created in show and tell sessions or watching the cut at the editors," says Taylor. "He was really pleased with the vfx too!"

Original plate

Final VFX plate

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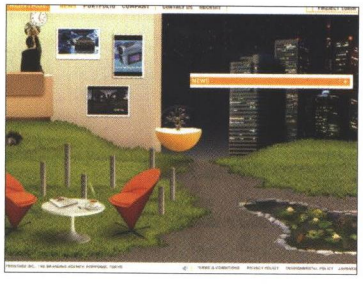


Surreal site by Grouek

French interactive agency has just completed a unique site for Japanese branding agency Frontage. Digit takes a trip into the virtual to explore.

By Lynn Wright

Paris-based interactive studio Grouek worked with fellow agency TYO-ID in Japan to create a surreal, interactive Web site for Japanese branding company Frontage. Launched at the beginning of September, the site offers visitors the chance to explore Frontage's virtual offices, which consist of an ever-changing landscape depending on what time of day the visit is made and how long the visitor stays on the site. For example, the Web site lives in Tokyo time, so to catch the daily activities of the office if you visit from Europe, you need to view it early in the morning or late at night because of the time differences. By using interactive videos and animations, the site offers a new discovery and a different way to explore on each visit. Each section has an evolving landscape that changes every two minutes and, instead of a home page, the site follows the user's viewing history and automatically displays the page most frequently used, although elements on the page will have changed.

Initial contact TYO-ID was made by Grouek, having identified that it wanted to work with the Japanese agency. In return, TYO-ID invited the studio to submit a pitch for the Frontage site.

Cultural differences

"We had no previous experience with TYO-ID and had no idea what kind of direction they would like the most, nor did we know how the cultural differences between Europe and Japan would pan out," explains Emmanuel Saccoccini, associate partner of Grouek. "So, we felt the best way was to propose what we would most like to do, something that would reflect exactly the type of interactive experience we fancied: immersive, surrealist, poetic, non-intrusive, artful, truly interactive and respectful of the user's intelligence.

"As this was our first pitch with a new Japanese client, we thought that we had very few chances to win the pitch, but we wanted TYO-ID to get to know us and the type of project we were hoping to do for them, so we took the opportunity of using this pitch to present ourselves to them. So if they liked us, be it for good reason!" he adds.

The brief for the site concentrated on its objectives and the message the client wanted to convey, namely for the user to 'experience' the corporate values of the company rather than just be told them, explains Saccoccini. These corporate values are 'unique, professional, open, dream'.

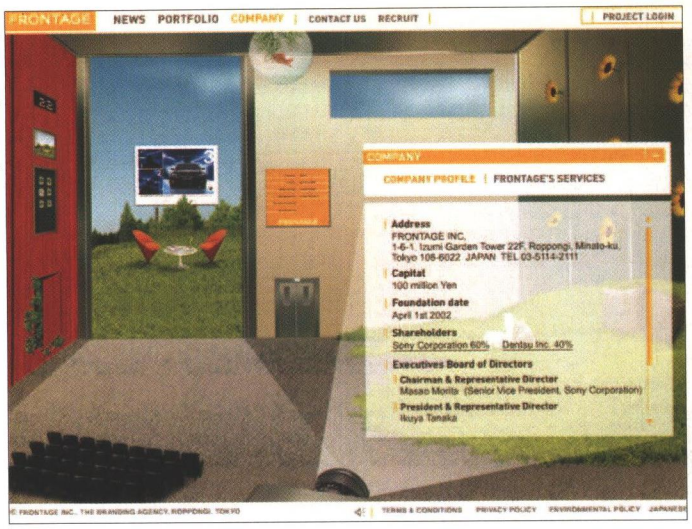
"For the creative part, we had almost total freedom, or should I say nearly all our ideas received positive feedback from the client, which is quite exceptional when you do a corporate Web site through an agency," says Saccoccini. The final site was very close to what was described in the original pitch, he adds, with a few features taken off due to the associated costs and other ideas simplified.

As Frontage had already planned its public launch of the new Web site, the Grouek team of three – Sonia Borsarelli, Cecile Pondard and Saccoccini – had just three months to conceive and produce the site. The team decided to use ever-changing landscapes using the principles of moving panes as in changing theatre stage backgrounds.

"The differences between each landscape for a given scene had to carefully balanced, for us to be able to re-use some elements across the different landscapes, but most of all we wanted the user to recognize immediately which of the three main sections of the site he/she was in, so the scene would look familiar, but with the strange feeling that something had changed since the last visit," says Saccoccini.

"Combined with the fact that the Web site shows a clear blue sky background or a night sky with stars according to Tokyo's local time (or rather server time), we have 14 different scenes!"

To ensure a visit to the virtual offices were ▶



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a surreal rather than an imaginary experience, the team wanted the graphics used on the site had to be realistic. They decided to work with photographic material and embedded videos to bring in the human, real-life touch.

Directed by Benoit Soucheleau, the videos were shot during one long day in a rented greenscreen TV studio, then the backgrounds, taken from the Web site (different scenes, day or night versions), were added to the clips in post production. Soucheleau had worked on the lights settings, using Grouek's graphics as reference, so the video would integrate in a realistic way. "We also wanted the actors to interact with some objects in the Web site, such as the hummingbird, desktop PC or elevator, so we developed a monitoring system for the director where he could see the frame and relative position of the objects in the Web site while shooting the actors," explains Saccoccini. "In the end, we are all quite happy with the way the videos are integrated seamlessly in the Web site."

Dynamic data

The site's dynamic content – mainly company news and portfolio – is stored in XML files that are updated with a CMS , developed by TYO-ID. Each XML file is duplicated for English or Japanese version. Grouek also made use of Flash MX's Professional data components, in order to have the Web site able to display titles only, sort data or drill-down in data, according to the user's needs.

"We had talks about whether we should choose an XML technology or set-up a Flash remote system with AMFPHP and a mySQL database, which we have since used in another project for the advertising production company Wanda," says Saccoccini. "In the end, we opted for the simpler and safer XML technology, so we would not have to deal with the server issues ... especially with Japanese-OS server without direct access to it. Looking back it really was the best approach I think, even though all the data-related tasks are performed on the client-side by Flash, it means we could develop and test the Web site locally and safely, and moreover it means that this site can be moved from one server to another in a matter of minutes."

Performance issues were a challenge for the team as the Web site initially was too heavy to handle. From graphics formats and timeline-based animations to action script programming, Saccoccini and his colleagues worked hard to optimize code until it loaded swiftly.

"We also found out that when you serve large XML files to Flash, it completely freezes the computer while parsing the XML. So we changed the intro part of the Web site in order to load all XMLs at the beginning, and hide this problem in the intro, then when the user moves around the Web site, all data is already loaded so it doesn't hang again. This is important if we want the user to forget about the technical side of it and focus on the virtual experience," he says.

All the video for the site was shot in one day in a greenscreen TV studio, and backgrounds and other elements added in post production.

:grouek

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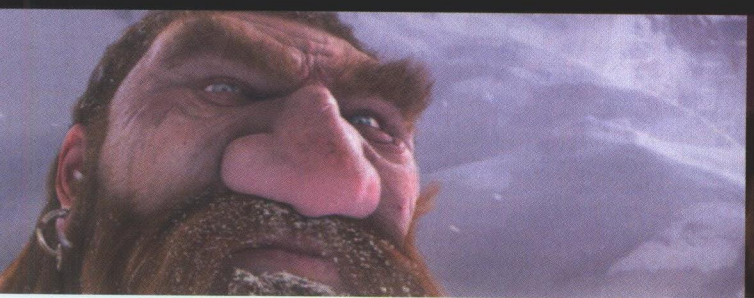

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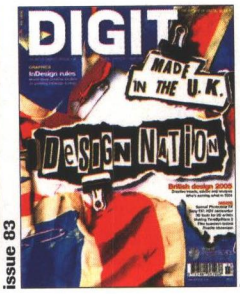
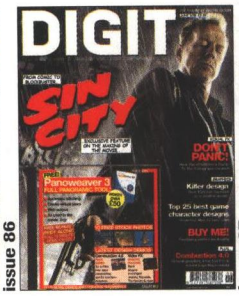


issue 84

issue 85

issue 92

issue 86



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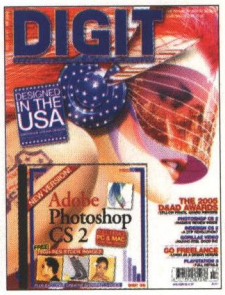

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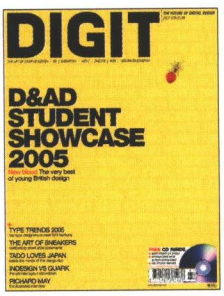

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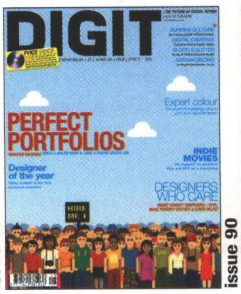

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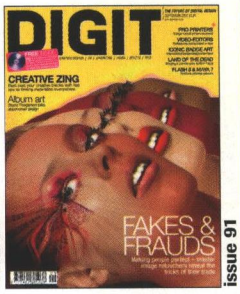

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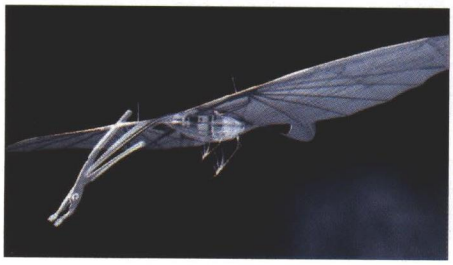


Depeche Mode

Dream-like visuals mixing CG and live action work to create a fantasy landscape that perfectly suits the haunting new track from Depeche Mode.

By Lynn Wright

Released at the beginning of October, *Precious* is the first single from Depeche Mode's eagerly anticipated new album *Playing The Angel*. Written by Martin Gore and produced by Ben Hillier of Doves and Blur fame, the new single is a slight departure for the kings of electro-pop. It features smooth, hypnotic vocals, which are perfectly complimented by the surreal, dream-like visuals of the accompanying video.

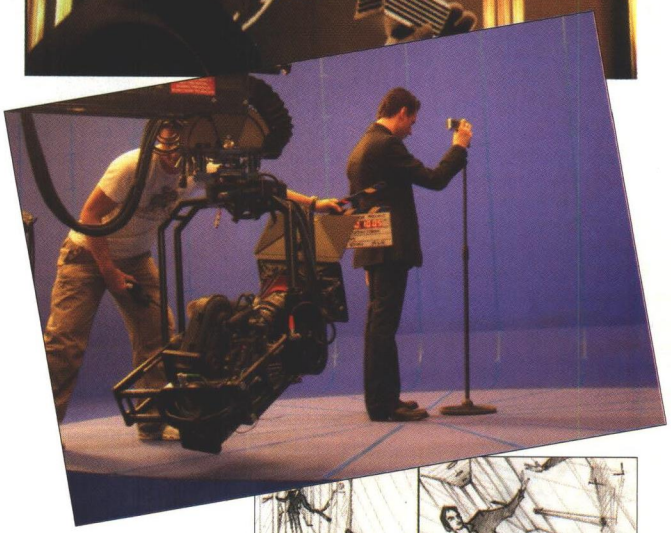
Shot on location in London in June, the video for *Precious* was directed by Uwe Flade. Having previously worked on an earlier video for the band – *Enjoy the Silence 2004* – along with videos for Dave Gahan (*Bottle Living*), Franz Ferdinand (*Michael*) and Gomez (*Silence*), Flade was invited onto the project by Mute Records and the band itself.

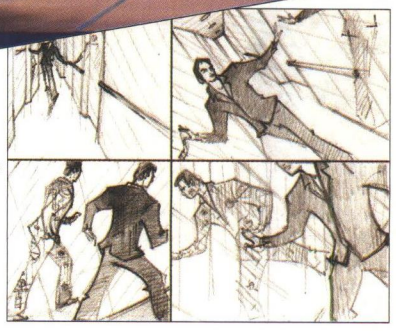
Listening to the track provided Flade with plenty of inspiration, and he came up with the idea of using a steamboat in the video. "When I heard the song I more or less trusted my gut instinct for designing the video," he explains. "The ongoing beat underlying the whole song felt for me like some kind of machine working, and in my mind I saw a steamboat paddle turning at the same speed throughout the whole song."

Rather than tell a story with the video, Flade was keen to create an atmosphere and a virtual world that would work well with the music. He employed the services of Swiss illustrator Niklas Briner, who created several sketches and compositions of the boat as well as the video's various creatures in Photoshop. As the band had only one day available for the live-action shoot, Flade decided the rest of the video should be created in 3D.

"I attempted to pick out the 'glassy' sound elements and create something which visually refers to that – clean and reflecting surfaces and materials, sometimes half-transparent objects," explains Flade of his inspiration for the video. "I also tried to pick rhythms and beats to connect those objects with movements – the hammers in the machine room, and the tentacles of the fish in the instrumental middle part."

Working with Briner, Flade first produced a hand-drawn storyboard, from which an animatic was created. 3D artist Andreas Böttger and Flade then worked on the various rooms and structures in the promo, before moving onto the creation of the 3D fish, sea creatures, and the bird. Compositing the live-action with the CG elements, and colour grading the footage to create a seamless video was the final challenge. "As a live-action director, this promo's post production was very difficult to plan," he says, adding that he could have used extra time filming with the band. That said, Flade has achieved a new look, a world away from the legacy of Anton Corbijn, yet something that works with the timeless Depeche Mode sound.





director	uwe flade *www.uweflade.de*
vfx house	effekt etage berlin *www.effekt-etage.de*
visual effects supervisors	holger schaal, björn kowalski
lead 3d artist	andreas böttger
3d artists	kai tennemann, maurice jochem, nico schwenke

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SPARK, Europe's premier Flash 8 conference showcasing the Macromedia® Flash® platform for developing content and applications, will be held November 16-18 in Amsterdam. The jam-packed, three-day, event features educational and inspirational seminars on motion graphics, video, mobile, interactivity, and open source. SPARK is produced by United Digital Artists and sponsored by Macromedia, and will be held in Amsterdam's celebrated Paradiso, the historic music venue whose stage has hosted everyone from the Rolling Stones to Phish.

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VERONIQUE BROSSIER, Developer (France)
MIKE CHAMBERS, Macromedia (US)
DANNY DURA, Macromedia (US)
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JOOST KORNGOLD, Renascent (Netherlands)
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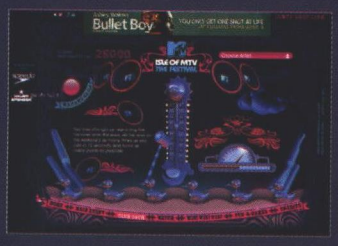

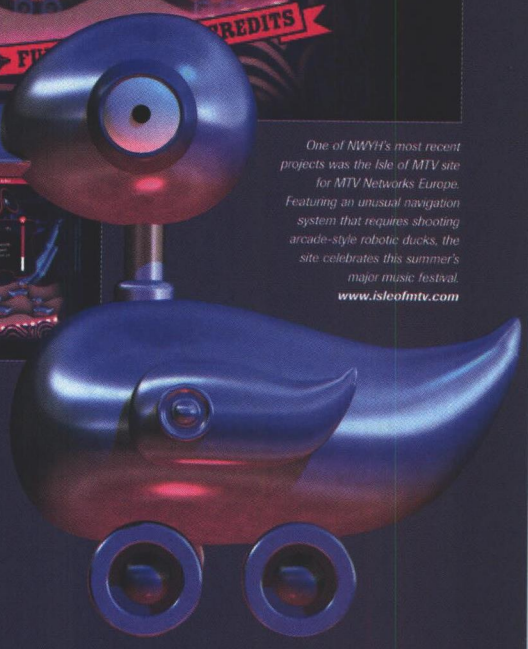

One of NWYH's most recent projects was the Isle of MTV site for MTV Networks Europe. Featuring an unusual navigation system that requires shooting arcade-style robotic ducks, the site celebrates this summer's major music festival.
www.isleofmtv.com

NOWWASH YOURHANDS

At full-service agency Nowwashyourhands, creativity is key with its design-hungry team busy on varied projects for blue-chip clients. Director Neil Jeffries tells Digit what makes them so driven.

By Lynn Wright

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NOWWASHYOURHANDS UNITEDKINGDOM DESIGNCOMPANY

Nowwashyourhands has one simple goal – to be known as one of the best design agencies in London. A difficult challenge, admits director Neil Jeffries, but one that the Nowwashyourhands team relishes. "We had a goal when we set the company up, to be working on major brands such as BBC Interactive and MTV – four years later that's exactly what we're doing," says Jeffries. "Now, we just want to keep pushing ourselves and do the best work out there for the best clients around.

NYWH was formed in 2001 by friends Jeffries, Angus Mackinnon, and Tim Spear. Having worked together in the new-media department of major London design agency Blueberry, the trio were faced with seeking new work when their employer became a victim of the dot-com bubble burst. Rather than work for another agency, the friends decided to they had nothing to lose by going it alone and hence NWYH sprung to life from Neil Jeffries' home office.

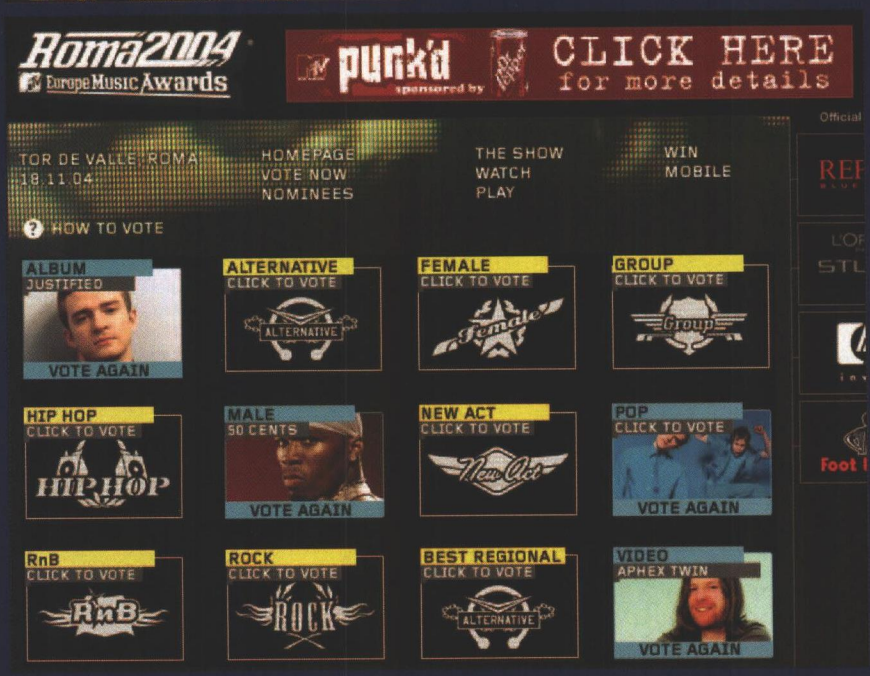
"When we started, we had a simple idea – large, experienced agency professionalism at small agency fees – this worked at a time when client budgets had been slashed," explains Jeffries.

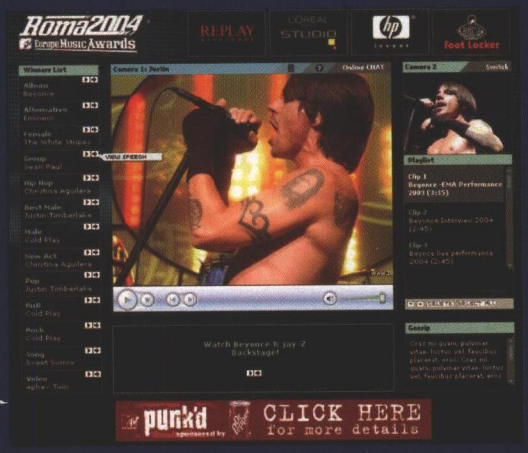
"On top of this, we had built up a good relationship with some great people at Blueberry, a few of which had moved onto the clients side, leading to our first work as NWYH."

Toilet trained

The company's name and logo, taken from a toilet sticker, offered great brand recognition by being so memorable. It also suited perfectly the agency's information graphics house style and parody of large corporation lifestyle, says Jeffries.

From day one, the agency has





MTV European Music Awards 2004

After investing in one of its biggest pitches to date, winning the MTV EMA site was a major achievement for NWYH. "This was a dream job," says Neil Jeffries. "It defines our creative and technological benchmarks, and proves that nothing is too big for us and that we could deliver exciting, highly creative and demanding content in a very tight time schedule."

The NWYH team took the client's concept of underground street racing in Rome and created a unique experience that involved CCTV-style footage of street racing, interspersed with eerie interference that allowed users to pick up secret codes, giving the impression of tapping into an underground culture. Combined with a Flash-based voting system and a live video console, the site proved to be one of the most successful voting campaigns ever produced for the awards, says Jeffries – no doubt one of the main reasons why the agency has won the contract for this year's awards site.

Eat your heart out Tony Stone, corporate culture as never seen before courtesy of the NWYH Stock Library.

worked with blue-chip clients. Its first client was Fox Kids Europe, closely followed by Ladbrokes. Within a couple of years, the agency had become experts in the online gambling arena with clients such as Victor Chandler, Ads Dot Com, Camelot, and Paradise Poker commissioning major projects.

"This wasn't something that was planned," explains Jeffries. "It just spawned off the back of our work for Ladbrokes."

The team, however, prefer not to be pigeon-holed as purely interactive specialists. As a full-service agency, Nowwashyourhands has worked on corporate identities, brochures, print advertising, branding, motion graphics, animation, TV commercials, along with online games, Web sites and back-end development.

One of the key aspects of the company's approach is the belief that business and pleasure are completely symbiotic.

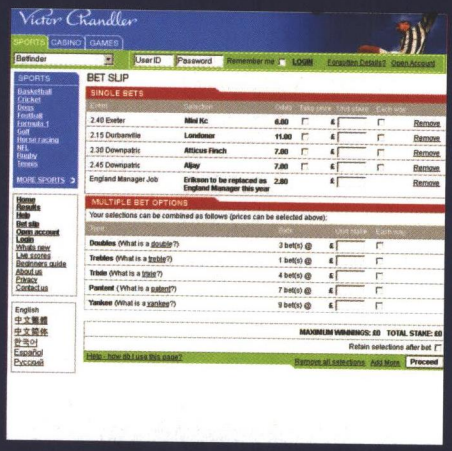
"We approach all client work as serious good fun, and, if we feel we've still got creative overspill we develop our own in-house projects," says Jeffries.

Fun and games

These spinoffs include a viral Flash game *Operations Slaps* (**www.operationslaps.com**), the company's own online T-shirt store (**www.attentionbrand.com**) and, a parody of the Tony Stone Library, the NWYH Stock Image collection (**www.nwyhstockimages.com**).

Milestone projects that have put NWYH on the map include a redesign of Victor Chandler's online betting site and MTV Europe's EMA 2004 voting site. Equally important to the agency has been its ongoing work on the government's e-skills UK IT Passport which has seen the team building a massive infrastructure using a myriad of technologies including Flash, ASP, XML and XSL.

"Our ability to work cross sector with unique creative and well delivered interactive solutions really raises our profile among peers and clients," says Jeffries. "We've developed a real sense of who we

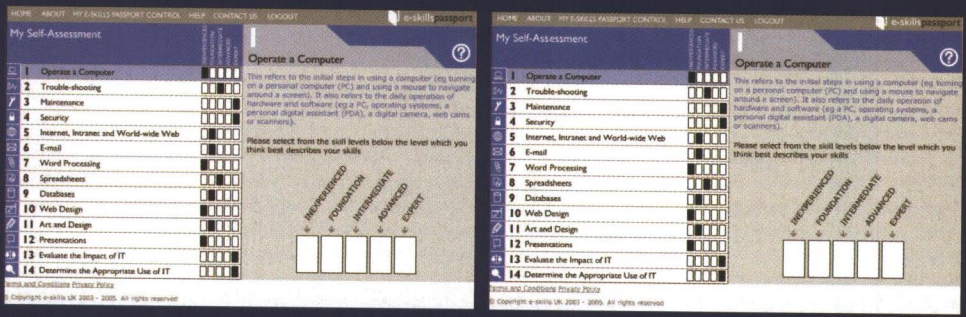


Victor Chandler online betting site

NWYH won the redesign of *victorchandler.com* following a four-way pitch. "It was considered by us as one of our best pitches and client wins at an early stage in starting up, so this was the basis on which we modelled all pitches to come," explains Jeffries. "From picking up the brief, doing competitive research, brainstorming, presenting the pitch, finalizing the proposal and contracts, working with an information architect, creating initial designs for usability testing, implementing final design and build to client handover and style guide. The project was flawless and we learnt so much about how a large multi-language, content-managed Web site project should be managed," he says.

e-skills UK's IT Passport

As part of the government's remit to improve IT skills, e-skills' IT Passport lets users assess competence levels and learn how to improve skills. "This is an extremely demanding and rewarding ongoing project for us," says Jeffries. "It delivers the same level of creative as for MTV, but for a wider, more segmented market, steered by governmental regulations. There are particular focal points on usability, accessibility, technical scalability, information architecture, content and identity, and how we bring them together to fulfil e-skills UK business requirements."



are with a strong brand and a name we all really buy into, and this gives us a real purpose and increased confidence in all areas."

Based in Soho in the heart of London, NWYH's offices are buzzing with energy and inspiration. The 13-strong team of full-timers are enthusiastic and passionate about their work, says Jeffries, who strongly encourages individual expression and personal projects among the team.

"Everyone has a voice and we see the company as an amplifier for individual expression. Our mouthpieces are our own internal projects like the monthly staff picks on our Web site, quarterly printed newsletter, and specially designed interactive issues," he explains. "We like to nurture a very driven and savvy design community, bringing in new and familiar talents along with way."

Important time is also set aside for the team to socialize with a regular out-of-the-office pub session on the last Friday afternoon of the month, and an annual, themed (and usually very messy says Jeffries) party – the first of which was appropriately held in a converted public lavatory.

Jeffries is optimistic of NWYH's growing role in the UK design industry. "The excitement has returned to the industry with some cracking work appearing again," he says. "As a norm it tends to be the smaller agencies producing the best and groundbreaking material, and there is still a massive gap between the larger design houses and the smaller consultancies with the larger ones still letting the side down through sub standard levels of creativity and questionable fees to clients," he says.

OUR TEAM ARE HIGHLY VOCAL, DESIGN SAVVY INDIVIDUALS WITH A PASSION FOR CREATIVE EXPRESSION

NEIL JEFFRIES

"Being positioned at the heart of the industry is important to us, and, as we consider ourselves to be a full-service agency with through-the-line thinking at all levels, creative inspiration, ideas, and brand identity come easily to us," he says. "Going forward, we want to grow our client list, grow our expertise, grow our reputation, work smarter, and on the best briefs out there."

WORK IN PROGRESS

Working Title Films co-founder Tim Bevan talks Hollywood, British talent, and making movies on a shoestring. "You've got to have a fire in your belly," he says.

Tim Bevan started Working Title Films in 1984 when he was just 27, and has seen the company grow into one of the most successful British film production companies ever. The company is best known for massive Brit-flicks such as *Four Weddings And A Funeral* and *Bridget Jones' Diary*, but its portfolio is surprisingly varied, taking in sleeper hits such as *Fargo*, and wacky comedies such as *Shaun Of The Dead*.

Bevan started the company with fellow producer Sarah Radclyffe, working on music videos at the dawn of the MTV era. Music videos led to feature films via Stephen Frears. Working Title produced Frears' first film, the no-budget Oscar-nominee *My Beautiful Laundrette*. Radclyffe moved on, and Bevan struck up a new partnership with Eric Fellner in 1992 when Polygram invested in the company. It's a collaboration that has seen Working Title go from strength to strength.

How did you become a film producer?
I got a job as a runner at a TV station in New Zealand when I was travelling, and I fell in love with the whole world of film and television. And when I came back to England I thought 'I don't want to be a runner all my life, those guys who run the place, the producers, it looks like they have interesting jobs.'

How did you survive financially in Working Title's early days?
It was very much a seat-of-the-pants existence. We would just get the movies into production and be able to take a production fee that would keep everyone fed. It was dangerous, but full of adrenaline too. It was exciting. It wasn't really until I was in my 30s that I worried about taking a salary, because by then I had wives and children.

Can you imagine working without Eric Fellner?
No. I've always wanted to work in partnership. There's a lot of 'nos' – you have to say 'no' a lot and you're told 'no' a lot. It can be very demoralising. It's important to have someone to share that with. We split the projects up, but we're there for the big decisions together. I can't imagine not working with Eric particularly and with a co-chair in general.

How would you describe the film producer's role?
Film is such an expensive medium it is kind of our job to marry the accountants up to the mad fuckers. It takes a mad fucker to make a movie, and it also takes an accountant. It's a constant balance, and sometimes the accountants get too much power, and things go wrong, and sometimes the mad fuckers get too much power and things go really wrong.

How did Working Title buck the trend and become one of the few successful UK film production companies?
We had extremely solid creative relationships with some extremely clever people that we've built up over a number of years. We've had luck. Between us we've made 50, 60, 70 movies, so we've got a lot of experience. It sets us ahead of everybody. It doesn't make us any better than anybody, it just makes us more experienced.

How good is the health of the UK film industry right now?
The UK industry is only as good as the directors, writers, and producers working in it. And right now I think there's some good young emerging talent. People will always whinge about money and this, that, and the other. The fact is that Joe Wright who made *Pride and Prejudice* and Edgar Wright who made *Shaun Of The Dead* are very talented filmmakers who're both making their second movie here in the UK. That's important.

What were your first impressions of Hollywood?
Over the years I've never been afraid of Hollywood. A lot of British writers and producers treat it as the enemy or with a certain nervousness. We've always seen it as a shop where you can get everything. Money, distribution, talent. It's great.

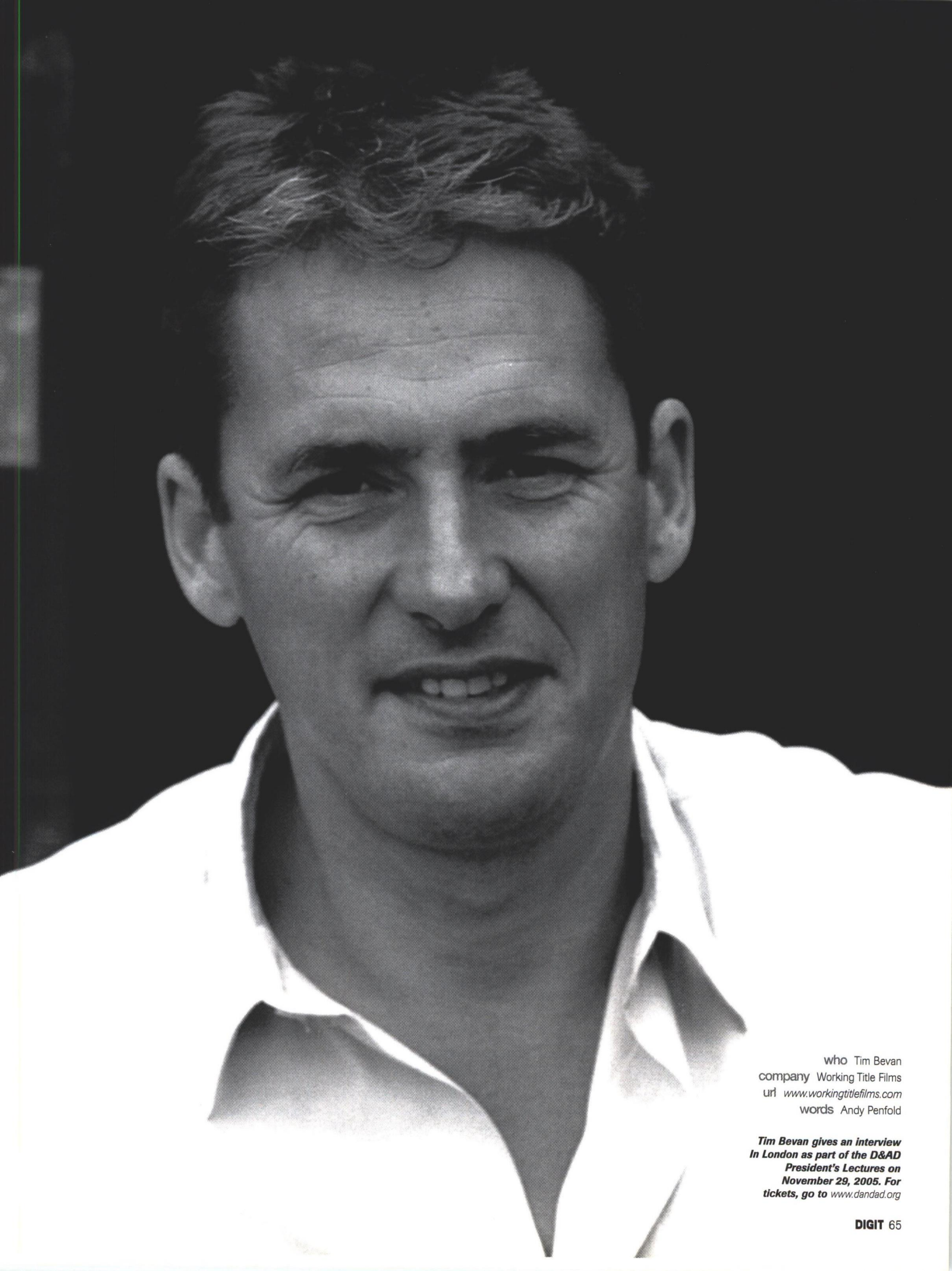
How is Hollywood's approach to filmmaking different to the UK's?
The studio system is different because when you go to Hollywood you know you're going. With a small British film, it tends to be that there's a finite amount of money, and everything is a compromise. With a Hollywood-backed movie, all you've got to ensure is that you make it the best possible film you can.

What advice would you give to budding filmmakers?
Be tenacious. When I was an independent filmmaker, I had a filing draw for each film that was empty at the beginning and it needed to have a yard full of 'nos' before you got the 'yes' at the end of it. So get out there and get the first 'no' because you've got a long way to go before you get the 'yes'.

Can digital filmmaking really democratise the filmmaking process?
The fact is that if you want to be a director you can direct a movie. Just borrow a DV camera and an Apple Mac computer and you've got the wherewithal to make a film. You can shoot and cut it. For some reason people don't get off their arses and do that. You've got to have a fire in your belly for it. At any given time there are a lot of people who like the lifestyle idea of making films, and then there are the people who really have a fire in their bellies.

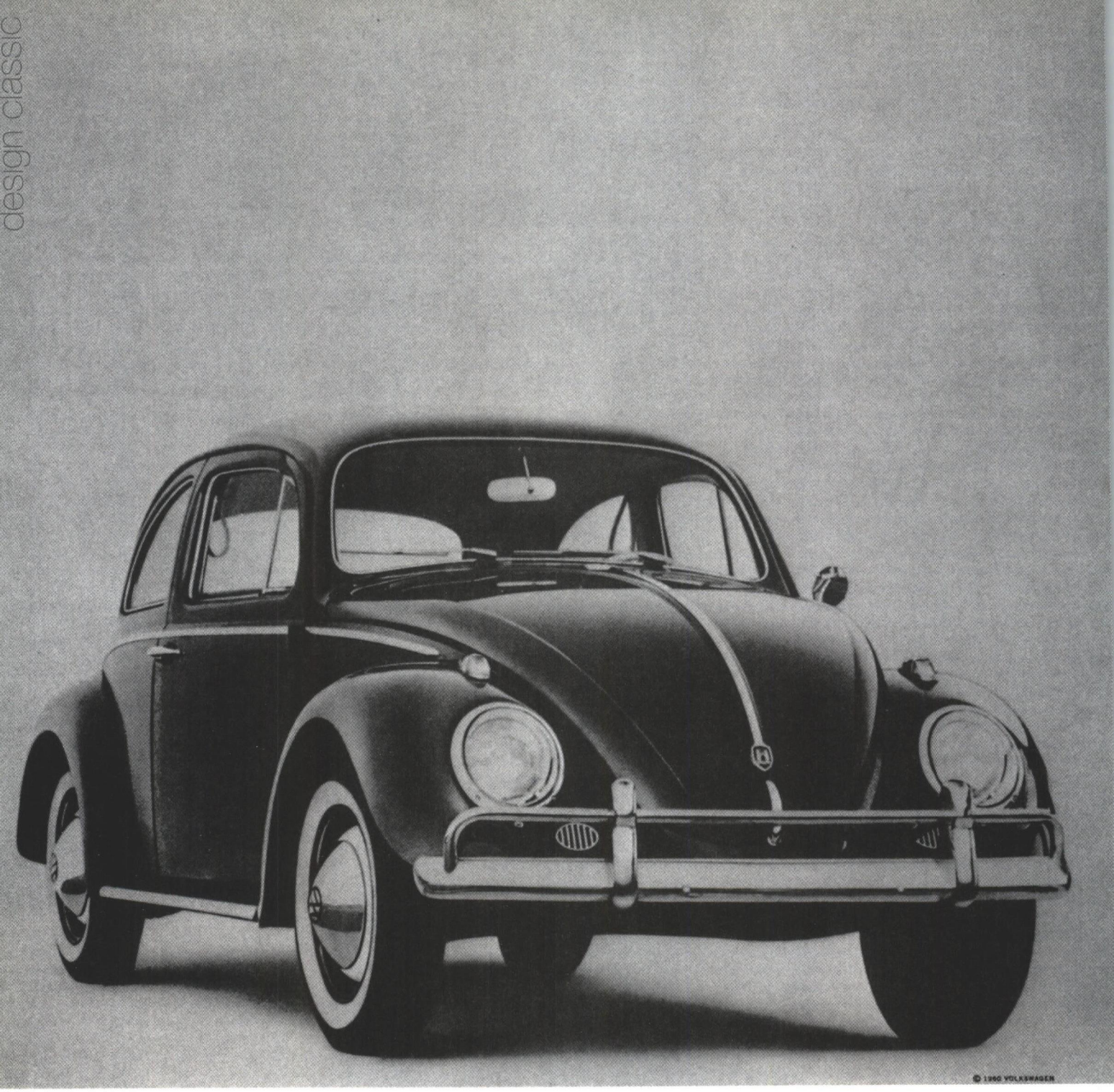
Why did you set up Working Title 2?
We wanted to make sure new filmmakers, writers, and producers had a home within the Working Title family. It was specifically set up to work with first-time filmmakers, and to hopefully feed the Working Title talent pool. Too often we'd make a film with a first-time director and have a modicum of success and the last you'd see of them was the tail of a 747 headed for Los Angeles. We want to provide a home for filmmakers to make not just their first film but also their second, third, and fourth movies as well.

What's your favourite Working Title film?
We're lucky, we've made some pretty good movies over the years, but I couldn't pick a favourite. By the time I've finished any of them I fucking hate them.



who Tim Bevan
company Working Title Films
url *www.workingtitlefilms.com*
words Andy Penfold

Tim Bevan gives an interview In London as part of the D&AD President's Lectures on November 29, 2005. For tickets, go to *www.dandad.org*



Lemon.

This Volkswagen missed the boat.

The chrome strip on the glove compartment is blemished and must be replaced. Chances are you wouldn't have noticed it; Inspector Kurt Kroner did.

There are 3,389 men at our Wolfsburg factory with only one job: to inspect Volkswagens at each stage of production. (3000 Volkswagens are produced daily; there are more inspectors than cars.)

Every shock absorber is tested (spot checking won't do), every windshield is scanned. VWs have been rejected for surface scratches barely visible to the eye.

Final inspection is really something! VW inspectors run each car off the line onto the Funktionsprüfstand (car test stand), tote up 189 check points, gun ahead to the automatic brake stand, and say "no" to one VW out of fifty.

This preoccupation with detail means the VW lasts longer and requires less maintenance, by and large, than other cars. (It also means a used VW depreciates less than any other car.)

We pluck the lemons; you get the plums.

The Beetle itself was redesigned in 1998. The look was updated, but the quirkiness remained.

REVOLUTIONARY DESIGN MILESTONES THAT CHANGED THE WORLD

#11 VOLKSWAGEN LEMON AD

Selling the Volkswagen Beetle to America was always going to be tough. New York agency Doyle, Dane, Bernbach took on the job, and changed advertising forever in the process.

BY ANDY PENFOLD

GEORGE MICHAELIDES

Managing partner, ***Michaelides & Bednash***

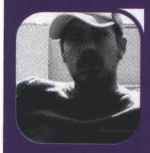
Imagine a world where owning a big, loud car is a national aspiration. We are talking about nothing less than the American Dream. Now imagine challenging the American Dream, by trying to sell a small, dumpy, foreign car. VW had the imagination to do it on its terms. Never has the margin between insanity and genius been so finely gauged.

ADRIAN STANNARD

Senior creative, ***Cunning Communications.***

I admire this ad. It's smart, discerning, and immensely confident – a product shot undermined by a headline. It's understated.

A European brand providing the antithesis of the American "pile it high, sell it cheap" mentality of the times. The design of the ad simply reinforces this. Stark photography of a well-known and successful product (with the copy telling us something we didn't know about it), allied to a clean and simple layout.



CHRIS HARMAN

Founder, ***Parent Design***

The Beetle ads are both classic in form and groundbreaking in their approach. Created by Bill Bernbach at DDB, the man who not only changed the way we look at advertising but also changed the advertising dynamic to team up copywriters with art directors for the first time.

Bernbach, a Jew from Brooklyn, managed to turn a car that Hitler launched, a pretty ugly and impractical car but solid and inexpensive, into a charming and seductive car, aimed at intelligent, good-humored, open-minded, trendy people. One of his principles was to: "appeal to the heart instead of the head, reach people through their feelings."

It was a remarkably difficult sell. The Volkswagen Beetle, Hitler's favourite car, ugly, unconventional, and European in every way, needed to be shifted Stateside. But what made the car appealing to Europeans – its basic and utilitarian approach to motoring, bizarre shape, and low horsepower – was distinctly unattractive to the American market.

In the postwar period, when the Beetle was launched in the US, petrol was rationed in Europe, so the small, economy car was a vital addition to the market. No such constraints bothered the US car market. And, US motorists are much more used to driving long distances – a task more suited to a saloon than a small car.

So, the agency commissioned to produce the ads for the Volkswagen Beetle in the US, New York's Doyle, Dane, Bernbach (DDB), had a huge task on its hands. The agency's creatives tackled it with elegance and humour, changing advertising forever in the process. Presenting the car's apparent deficiencies as virtues, the *Lemon* ad was irreverent and charming, and did away with the empty exaggerations consumers were used to. The audience was disarmed by Volkswagen apparently making fun of its own product.

The flipside of the car's basic construction was presented as great value. Its low horsepower gave it longevity. Its odd look made it unique. The ad represented a perfect marriage of copy and imagery, and set a standard that has inspired advertisers ever since.

DDB was at the centre of an advertising revolution that saw art directors given equal importance to copywriters. It lead to a new approach to design in advertising, opening up new possibilities for the combination of image, type, and copy.

The campaign appealed to the new generation in the 60s – the decade that saw the dawn of youth culture. It was witty, honest, and funny, instilling the notion that the Beetle, or "Bug" as it was christened in the US, was a desirable product after all.

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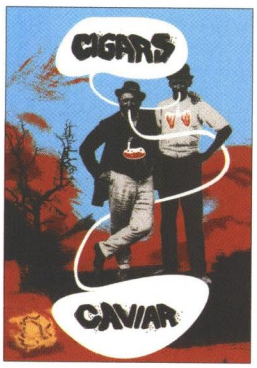
2

1-5 INGI ERLINGSSON

www.ingierlingsson.com, ingi10@hotmail.com, *07808 985 629*

Ingi Erlingsson was born in Iceland in 1982. He was raised in Denmark, and eventually ended up in England. He says he has had a passion for creating from a very early age. In recent years, he has embraced digital technology, and has branched out into most areas of design, while harbouring a soft spot for illustration. Erlingsson tries to work in diverse areas, and when he's not compiling graffiti colouring books or doing illustrations for clients such as *Rockpile* magazine and Woodsuch, he's out looking for new adventures and challenges. He is co-founder of design collective Speech-Bubble.



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1-6 **JOHN KONTOS**

www.againstperfection.net,
07966 369 899

London-based John Kontos has a contemporary style that makes use of redefining classic and popular culture graphics from both pre- and post-war influences. His designs have been the hallmark of both Web and print projects, with a particular focus on music promotion and propaganda. Kontos is currently preparing work (some of which is shown here) for an upcoming exhibition. More information is available at the Web address above.

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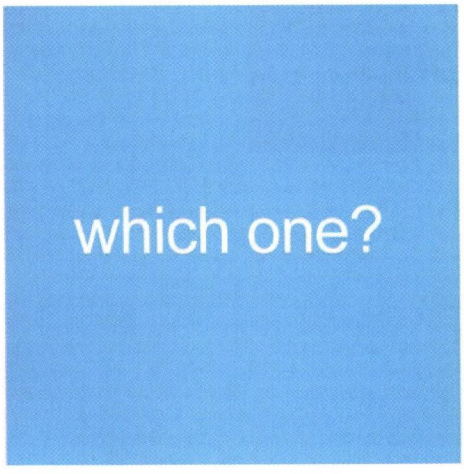

6
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there was no end of me
Get into a neat new group of underthings.
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Panties in a Lycra' blend ruffled with lace that shape
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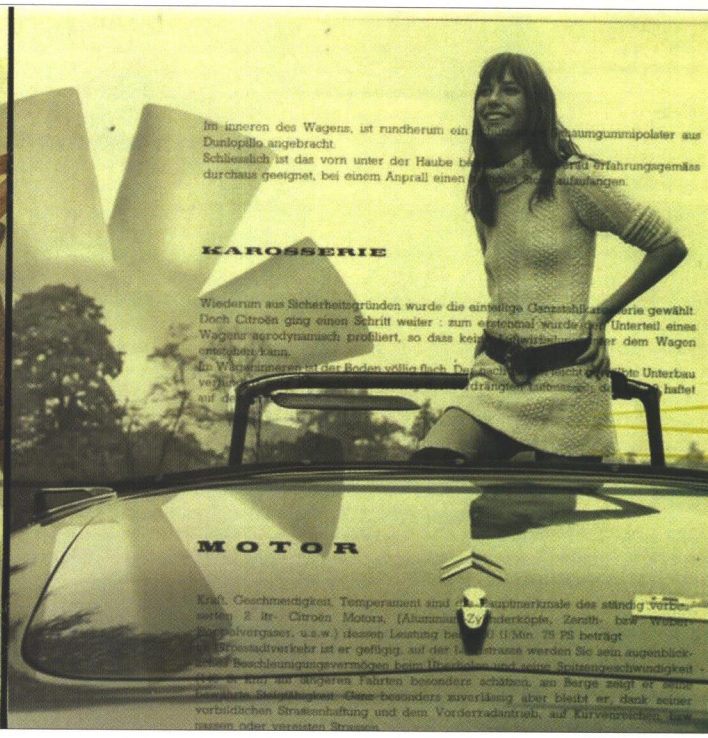
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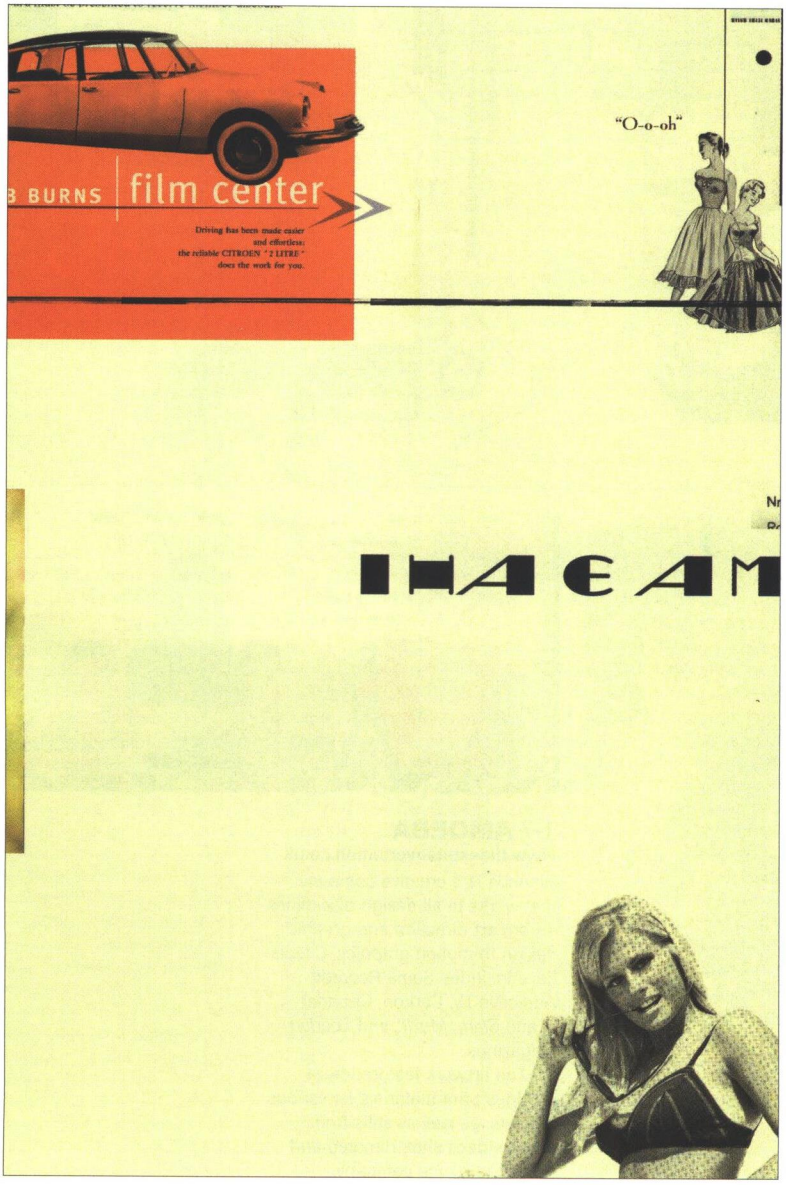
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5

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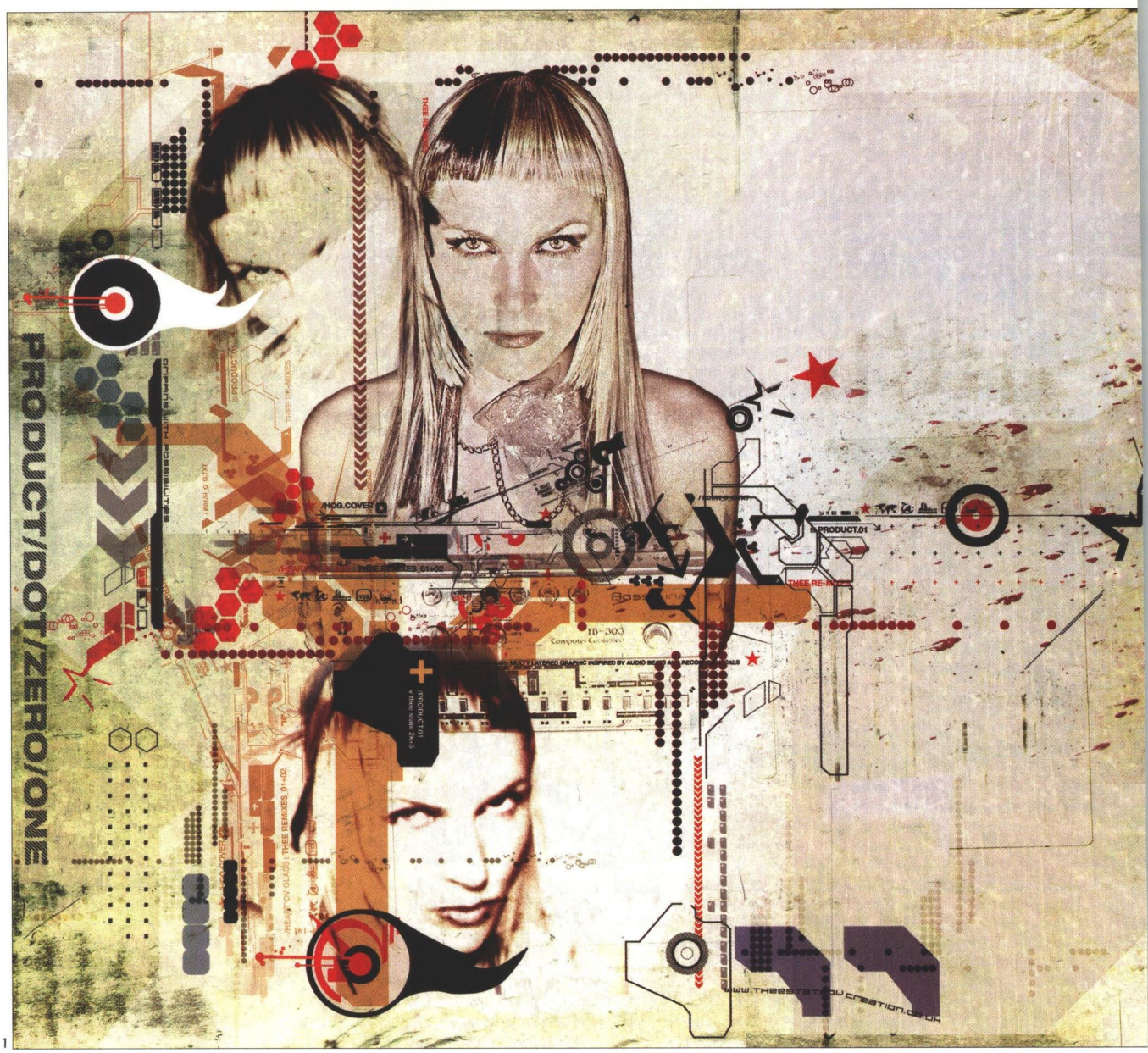

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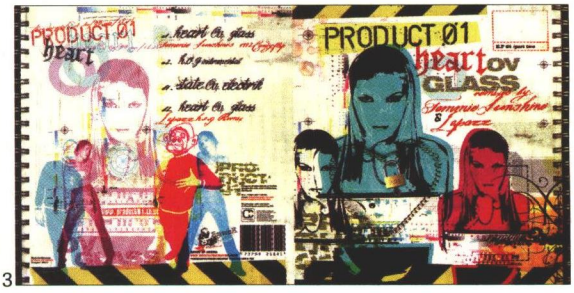

3

1-7 **AMOEBA**

www.theestateovcreation.co.uk

Amoeba is a creative company that works in all design disciplines – from art direction and graphic design to motion graphics. Clients have included Soma Records, Addictive TV, Carlton, Channel 4, and *Slam*, *Muzik*, and *Loaded* magazines.

The artwork featured here includes print materials for various projects, as well as stills from music videos shot, directed and produced by the company.

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label Information
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Design
Winter
summer
Collections

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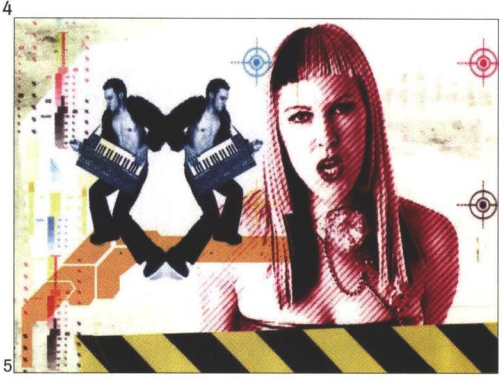

5

/design/film/motion
amoeba
thee rhythm ov vision

6

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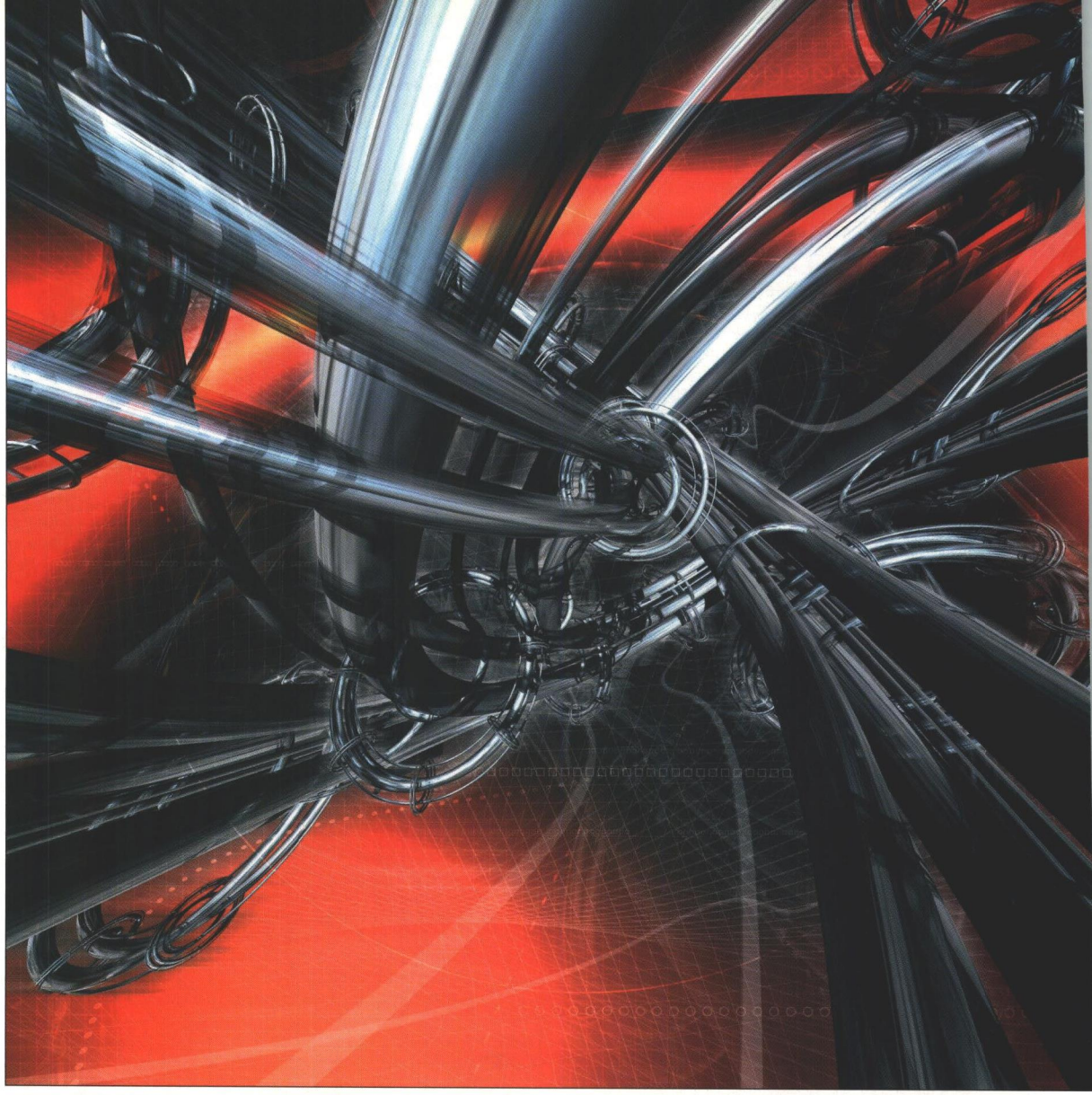
7

1-3 **PAUL CULLEY**

www.paulculley.co.uk,
mail@paulculley.co.uk,
07740 354 742

Paul Culley is a freelance designer producing work for several national retail and commercial companies. He uses various techniques to create his illustrations, including Photoshop, FreeHand, and some 3D applications. Culley was recently included in an exhibition in London, and he hopes to continue exhibiting in the future.

"I find that using digital technology helps my creativity as the possibilities seem to be endless," he says. Check out his Web site for more information.



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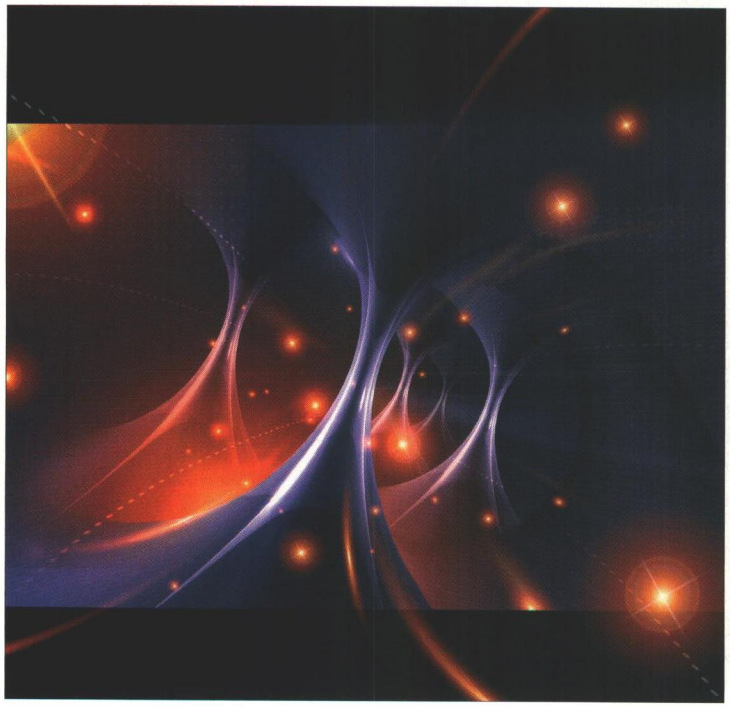

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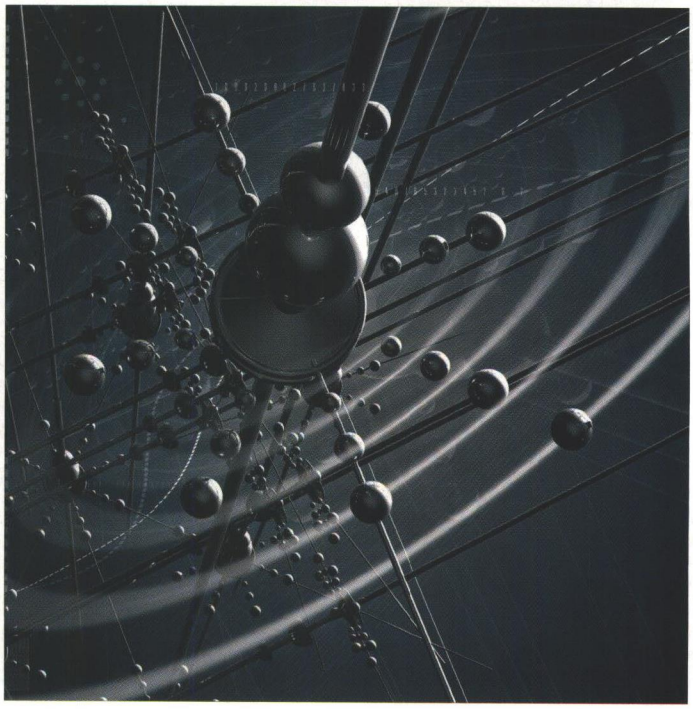

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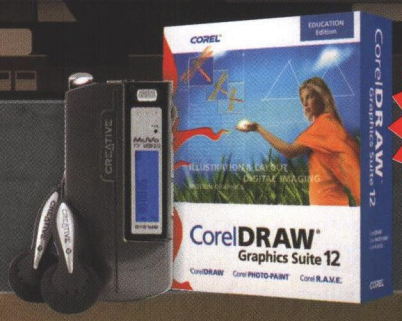

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this month

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Image by aydin aryainejad, aydinaia@yahoo.com

SoftimageIXSI 5.0

3D modelling, animation and rendering software

format Linux, Windows XP/XP 64-bit

price Foundation £299 plus VAT, Essentials £1,189 plus VAT, Advanced £4,159

company Softimage, *www.softimage.com*

contact Softimage, *01753 655 999*

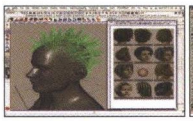
minimum specs Pentium III processor, 512MB RAM, Open GL-compatible graphics card with 64MB RAM, 710MB free hard disk space, USB or serial port for dongle

pros ***XSI is a compelling 3D product that seems to have little in the way of weaknesses. It's an artist-centric package and the Advanced version has all the tools and features you could wish for.***

cons ***The Advanced version is expensive.***

Digit Rating ★★★★½ DIGIT BUY

alternatives



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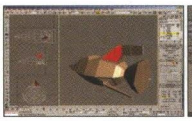

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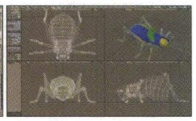

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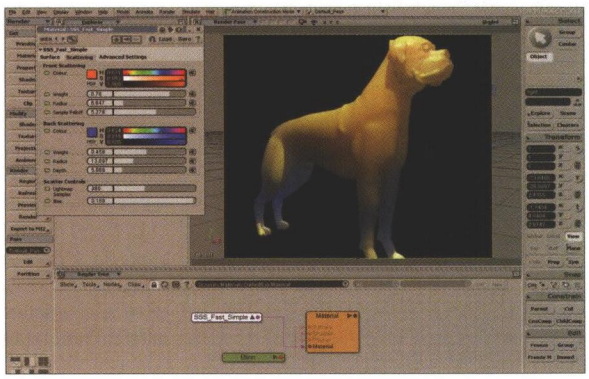
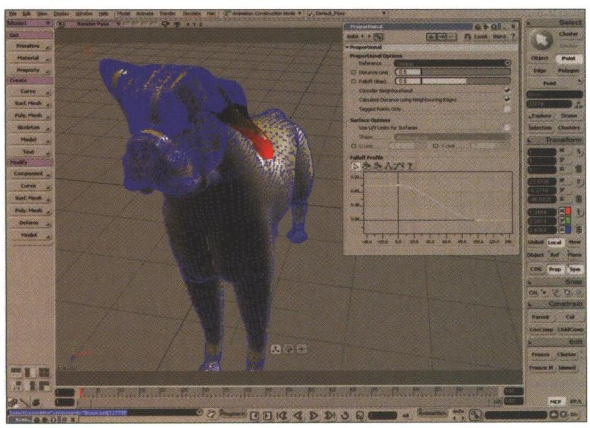


above. ***Mental Ray 3.4 is tightly integrated in XSI 5.0. Two new shaders, including fast subsurface scattering, make translucent objects easy to render.***



above. ***There's a new modelling tool called Tweak Component. It lets you grab and pull (or slide) components without having to preselect them.***

When Softimage|XSI was initially launched as a next-generation 3D animation program, it showed a lot of promise but fell short of the initial hype surrounding its advanced animation capabilities. XSI 5.0 is at last the "next generation" 3D suite Softimage has always promised, thanks to some very important advances.

This is the first version of XSI to run on 64-bit enabled systems. We tested XSI on a Windows XP Pro x64 Edition workstation. Over the course of testing, the system was remarkably resilient and robust without a single system hang. This is quite a surprise for such a new technology, and bodes well for production houses chomping at the bit for 64-bit applications.

We tested the application on a Pentium Dual Core 3.2GHz Fujitsu-Siemens machine with 2GB of RAM and a NVidia Quadro FX 1400 graphics card (reviewed as part of our group test on page 108). We were not able to install a dual boot system to run the 32bit version of XSI – possibly due to the 64-bit architecture – but it was clear that XSI 64-bit was running very nimbly indeed.

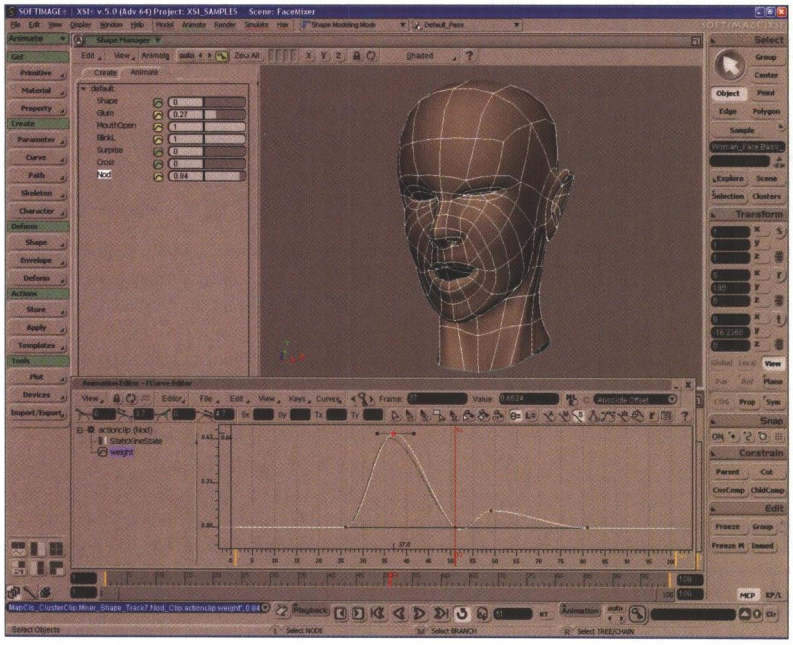
We were advised that 64-bit really comes into its own when you run scenes requiring 4GB or more of RAM, but XSI is designed to work with any amount of RAM efficiently.

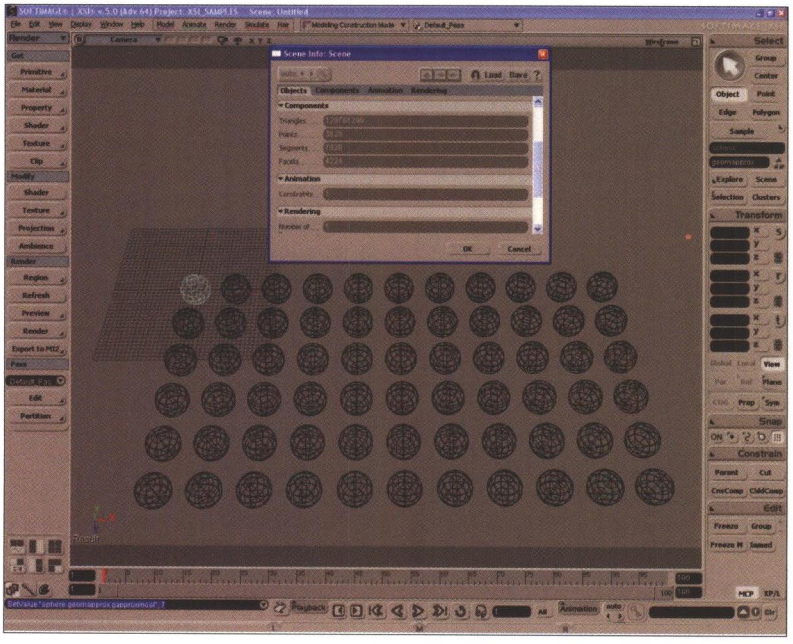
Bold claims

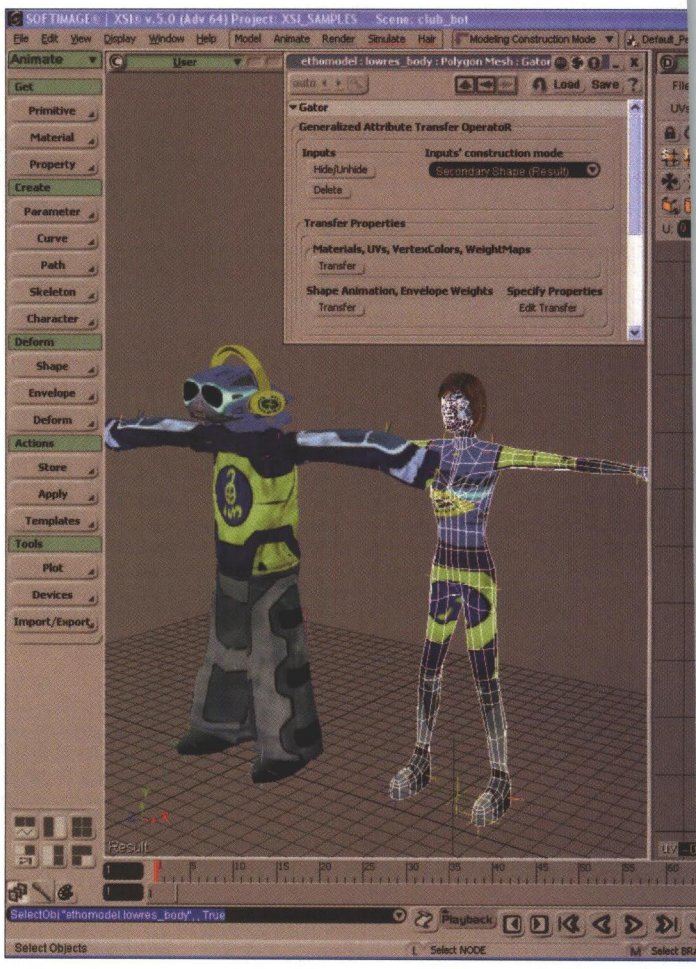
At the heart of the new system is the Gigapolygon Core. Softimage claims that this new architecture allows artists to create scenes on an unimaginable scale in terms of numbers of polygons, animation channels, and other effects. According to the company, it allows for not just millions but tens of billions of polygons in a scene, without causing the application to keel over, freeze, or take a week to render a frame.

This bold claim is begging to be tested. We created a sphere, and set the Geometry Approximation to seven smoothing iterations both in OpenGL and the final Render. This gave a polygonal object with a couple of million polygons. Shaded scene interaction was more or less real-time at this stage, which is impressive.

We duplicated that sphere ten times (not instanced, but raw duplicates) giving an actual triangle count of 21.6 million. This time the OpenGL interaction







started to chug a little, but it was still usable. So, we pressed on. The ten spheres were duplicated a further five times giving us over one billion polygons in-scene. We waited for the duplication operation to complete and watched the Task Manager as XSI gracefully took over the system resources.

After about five minutes, Windows popped-up a warning to say it needed to increase the virtual memory page file. Things did not progress further and we killed XSI. We tried again using wireframe display mode, and this time XSI had no problem whatsoever and we could pump up the polygon count to over a billion polygons, and render them without a hitch.

There's plenty more beside sheer polygon grunt, though. XSI's interface has been refined and improved, making it a lot easier to use. There's a good layout scheme, and key mapping that mimics that of Alias Maya so that migrating artists can get up to speed quickly. The Maya key map features QWERTY select-&-translate tools and Alt key view navigation. A mirror of Maya's handy Channel Box and Layer bar is also implemented.

XSI features an all-new rigid body dynamics system from Ageia called PhysX. This offers a radical increase in performance over the old ODE system (which is still available for backwards compatibility and is selectable in XSI's preferences). The new dynamics engine is capable of calculating thousands of interactions in near realtime, and it's a joy to use.

Gator is a new general attribute transfer tool for transferring surface attributes such as UV textures, weight maps and animation from object to object, and is particularly suited to characters. Gator streamlines character production and allows easy re-use of existing character model data, even of different and totally unrelated topologies.

Gimme some skin

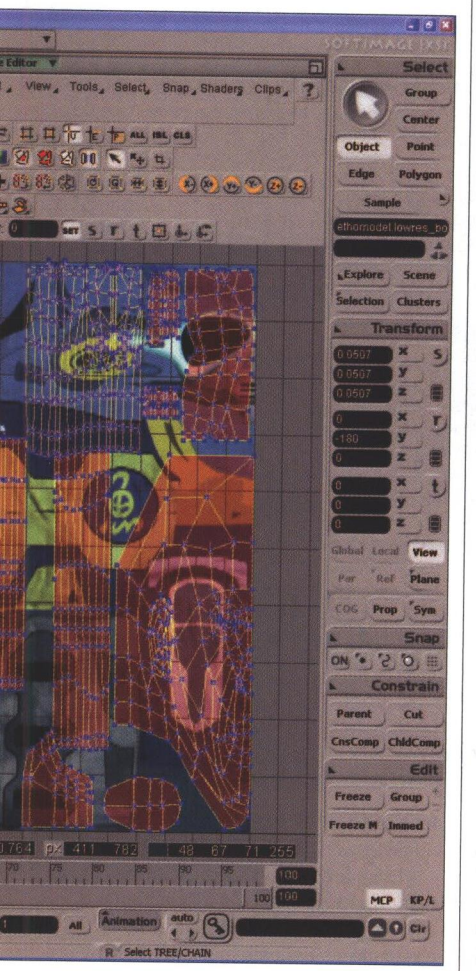
Mental Ray has always been tightly integrated into XSI, and version 5.0 is no different. Version 3.4 of Mental Ray running on a 64-bit system it offers improved memory performance and efficiency especially with large scenes. Two new shaders – Fast Skin Shader and Fast Subsurface Scattering – allow very rapid rendering of complex effects such as skin and other translucent materials. The render passes feature has been improved too, and there's now the usual passes such as Diffuse, Reflection, and Specular channels available in the Render Options. Just check the boxes of the passes you want.

The creation and management of shape animation is improved with the new Shape Manager panel. Here you

top left. ***The new Shaper Manager is an all-in-one interface panel for producing shape animation such as lip synching and facial animation.***

left ***This scene contains over one billion polygons. Not only is interaction fast thanks to a new reduced polygon display mode, but the scene will actually render.***

top. ***Gator allows you to transfer surface attributes including deformations, animation and UV textures between objects based on point proximity.***



can create shape poses, modifying the base geometry and generating new shape poses, as and when they are needed. You can also perform keyframing of the shape weights and blending on the base mesh, all from within a single simple interface.

There's better integrated Hair creation, grooming, and rendering in XSI Advanced, and new Normal map rendering capabilities. ZBrush models can be imported, and you can use beziér curves for modelling. There's also a new Tweak tool for freeform modelling.

Generally, XSI behaved well, though there were some interface bugs in which nodes in the Compositor became unresponsive and required a restart. Overall, though, the application felt solid and reliable.

In terms of value, the base version, Softimage|XSI Foundation, is a steal at only £299. The Essentials version, which offers 64-bit capability, compositing, and the gigapoly core is also excellent value. Softimage|XSI Advanced costs a lot more, but it gives you Hair and Fur, Syfex Cloth, and Behavior crowd simulation, on top of all the other features. It's simply a superb package for advanced cinematic and broadcast production.

Simon Danaher

HDR-HC1

HDV camcorder

format Mac OS X, Windows XP
price £1,275 plus VAT
company Sony, *www.sony.co.uk*
contact Sony, *08705 111 999*

pros ***Much smaller and lighter than current HDV competition. High quality footage capture. Manual ring for zoom and focus. Touchscreen.***

cons ***Single sensor. No XLR inputs. Built-in mic picks up tape noise.***

Digit Rating ★★★★☆

The HDR-HC1 is the little brother of the HDR-FX1, which we reviewed back in March (Digit 84). It drops the FX1's 3CCDs in favour of a single CMOS sensor, and shrinks the body size and weight down to that of a traditional consumer handheld.

As with the FX1, the model is available in 'consumer' and 'professional' variations, with the forthcoming HVR-A1 adding XLR audio inputs and more manual controls to the mix – and around £750 to the price.

The HC1 uses the 1080i variant of the HDV format, recording at 1,440-x-1,080 pixels, which offers up to four times the resolution of DV.

The video quality, be it DV or HDV, is excellent for a single sensor device – though not up to that of 3CCD HDV camcorders such as the FX1, or JVC's HD100E. The CMOS sensor provides good colour and excellent dynamic range, with detail maintained in bright areas and shadows.

The HC1E did a great job adjusting to transitions from light to dark and produced a clean, low-noise result when shooting in lower light indoors, a result helped by Sony's Enhanced Imaging Processor.

Pickup lines

The camera has four rather than two microphones, with the input from two left and two right microphones mixed to create the left and right stereo channels. The HC1E's onboard mics did a good job, although they did pick up a bit of noise from the tape mechanism. There is a hot shoe, so you can attach an optional external mic if you want to eliminate drive noise.

The HC1 uses touch-sensitive LCD screens for the menu interface. It's a good system – you never need to fumble about looking for the menu button and fiddling with tiny direction arrows to navigate the menus. Unlike other Sony models, this hasn't totally precluded on-body buttons and switches – though there are still less than we'd like.

The touchscreen can also provide spot focus. Simply frame your subject then touch the part of the screen image you wish to focus on to have the camera focus on that spot.

The 10x zoom Carl Zeiss lens comes with a dual-purpose zoom/manual focus ring. Plus, there's an extended zoom button that temporarily zooms in on the centre of the screen to aid in manual focusing. The LCD is natively 16:9, so you get full use of the screen area when shooting in 16:9 mode.

As well as video capture to mini-DV, the HC1 can capture 2.8mp stills to the included 16MB Memory Stick Duo card.

You may want to wait for the fully-pro A1, but the HC1 is a great second camera for owners of the FX1 or Z1.

Neil Bennett & Bruce Buckman

specifications

Recording system: 1080i HDV ***CCD:*** 1/3-inch inch, 2.8-megapixel ***Film-style gamma:*** No ***Viewfinder size:*** Digital ***Minimum illumination:*** 7 Lux ***Interchangable lens mount:*** No ***Lens zoom:*** 10x ***Image Stabilization:*** Digital ***LCD screen size/resolution:*** 2.7-inch, 1.2-megapixel ***Weight:*** 680g

Stitcher 5

Panorama creation software

format Mac OS X 10.3/4, Windows 2000/XP
price £349 plus VAT
company RealViz, *www.realviz.com*
contact DCP Systems *0114 257 3620*
minimum specs Power PC G4 533MHz or Pentium 4 1GHz processor, 512MB RAM, Open GL-compatible graphics card with 32MB RAM

pros ***Versatile panorama stitching program now with full automatic and manual options. Handles cylindrical and spherical panoramas and saves templates for fast stitching of subsequent projects.***

cons ***Can't handle two-shots from circular fisheyes (for patent reasons). Can't merge bracketed exposure shots for wider range, but Photoshop CS 2 can do this in advance.***

Digit Rating ★★★★☆

above. ***The first task is to sort out sets of image files (previewed here in Adobe Bridge) and number them for easier reference.***

Stitcher 5 is a panorama assembly program that can blend multiple overlapping conventional photographs to produce a seamless ultra-wide image. It can work with anything from just two or three originals to ultra-wide panoramas up to seamless 360 degree views. It can also assemble fully spherical projections from three or more rows of originals, in which the camera pivots up and down as well as left to right.

There's a choice of projections available. You can produce low-resolution cylindrical and cubic images for interactive Web formats such as QuickTime VR (now with a script menu); high-resolution cylindrical and planar for prints, or spherical (or "equirectangular") and cube faces for export to 3D or other programs.

Export formats include cylindrical or cubic QTVR MOV, Shockwave, VRML, and most 8- or 16-bit photographic bitmap formats. Imports include photographic bitmap formats, plus Cineon, Maya, and SGI image files. It can also convert existing panoramas to other projections, or stitch tiled flat scans.

RealViz has been selling Stitcher since 1999. Version 3 in 2002 was the first to ring all the right bells, with a logical user interface, multi-row assembly and a wide range of output projections and file formats. The new version 5 is initially available for Mac OS X and Windows XP. There's also Stitcher Express, a basic 8-bit version for £70 plus VAT, but it's not yet updated with Stitcher 5 technology.

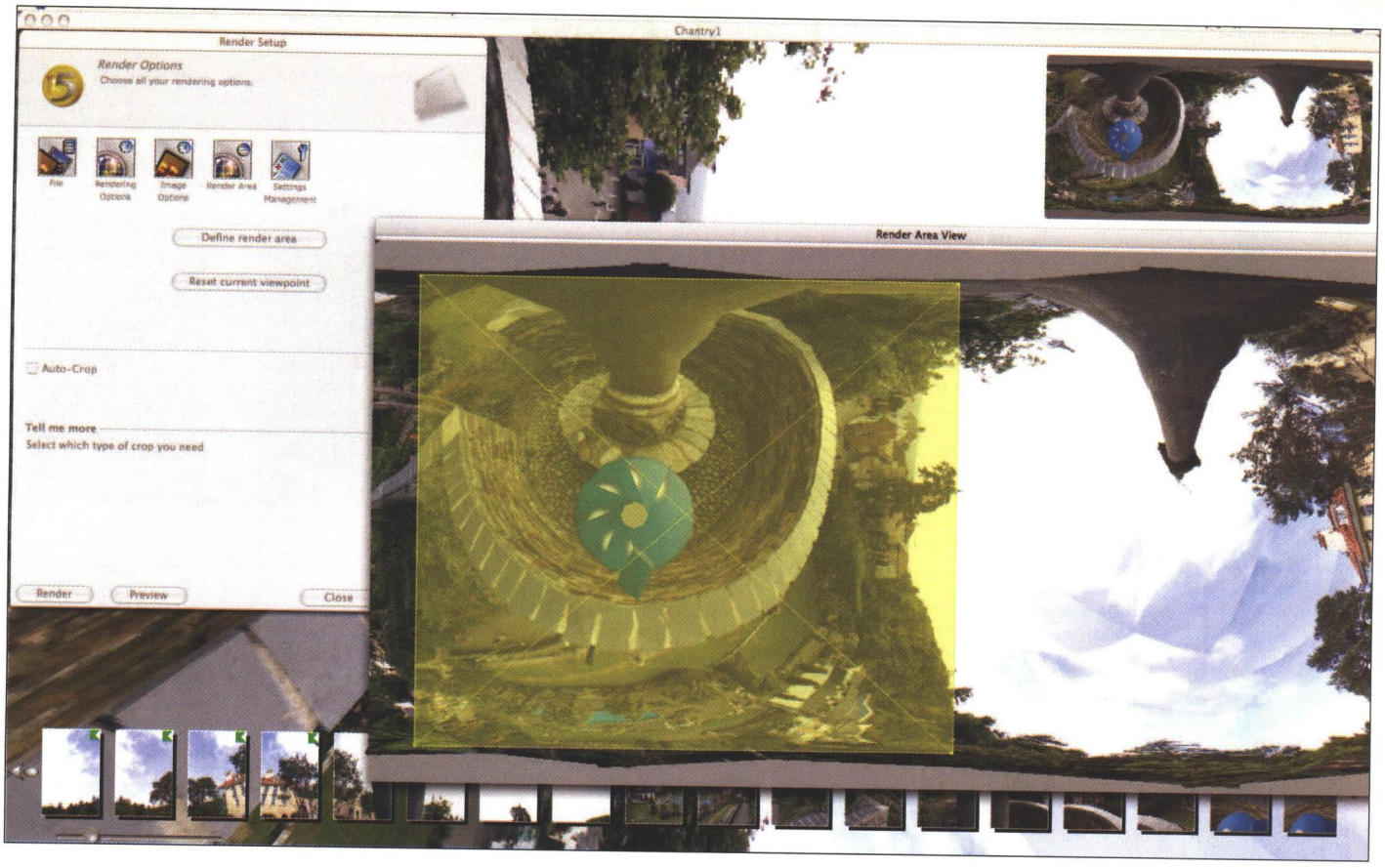
There are plenty of significant new features. Most helpful is fully automatic stitching. Stitcher will do its best to assemble sequentially-numbered files automatically, with decent results. The original semi-automatic process is still available – this allows you to drag each image into rough alignment before Stitcher fine-tunes the fit.

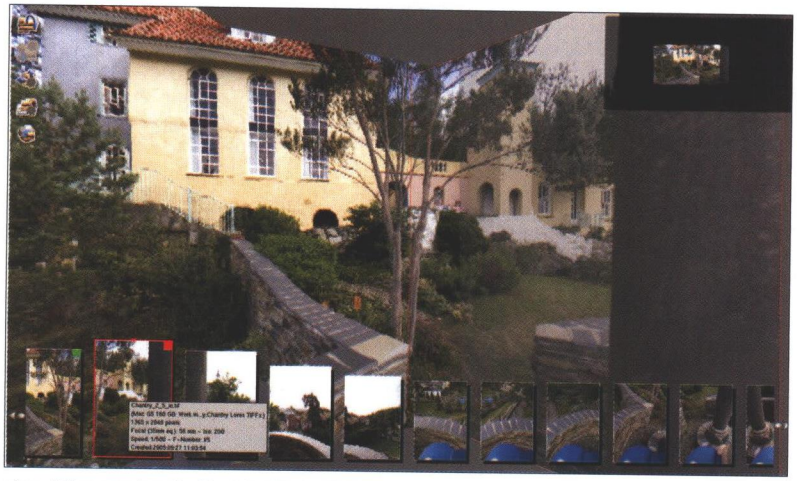
Also new is manual stitching, where the user defines multiple pairs of matching points on adjacent images. This can rescue some badly aligned images.

Cross-stitch

The user interface has been tweaked, with a live preview window that shows the stitched effect instantly. A strip of selectable original images can be superimposed over the main assembly window, with an OS X-style Genie effect that enlarges each image as you mouse-over it. This view just gets in the way, but you can switch it off and display the original Image Strip in its separate window. Keyboard shortcuts can be assigned to any Stitcher 5 command.

Stitcher 4 introduced the ability to create Stencils, allowing you to mask out areas that appear differently in multiple images, and just use the best head-on view – eliminating blurred areas. Stitcher 5 lets you create 3D stencils in the main window, instead of in a separate window. It can also use Photoshop masks that are part





above. ***When you drag the files into Stitcher 5 they appear in the horizontal thumbnails. We've used semi-auto stitching for the first three images.***

of Photoshop PSD files as stencils.

Another new feature is the ability to save stitching templates, so once you've produced a stitch you can apply those settings to anything else produced with the same lens-&-tripod combination, which speeds things up a lot.

Weird world

Hotspots can be added and associated with hyperlinks to URLs and other panoramas, to build up a virtual tour.

When you're happy with the stitching you can choose the output method, projection, and resolution. Then you just hit the Render button and leave Stitcher to get on with it. Speed depends on your system and the projection, but as an example a 5,500 pixel wide, 24MB main image took 6.5 minutes on a dual 2GHz Mac G5.

Although Stitcher's primary purpose is naturalistic panoramas, you can also create weird distorted projections by moving the viewpoint up or down before rendering a spherical or cylindrical projection. The intriguing results can give land wrapped around the sky or vice versa, or s-shaped horizons. The new live preview encourages experimentation, and lets you make fine adjustments before rendering.

Stitcher 5 is a useful advance over its predecessor. The live previews, plus the ability to quickly apply successful stitching alignments to new projects make for an impressive upgrade.

Simon Eccles

above. ***When you're ready to render there's a wide choice of resolutions, projections and other settings, plus the ability to select the render area.***

Heads up: aligning the camera on a tripod

While you can just about get away with hand-holding the camera for distant landscape shots, this won't work for close-in objects such as buildings or confined spaces. Accurate joins demand a tripod plus a special panoramic head that aligns your camera to rotate precisely around its optical centre.

Samples for this review were shot using a new heavy-duty spherical head from 360precision (www.360precision.com). This is the first spherical head that can be factory-aligned for common combinations of pro digital SLRs and ultra-wide lenses.

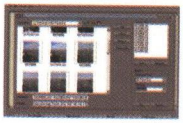
Other SLR-capable heads require the user to adjust the alignment for their own cameras, which is hard to do accurately. Ours was set up for a combination of a Canon EOS 10D camera with a 14mm lens.

The tripod head we used is strongly-built, weighing 1.96kg. Its precision is belied by the simplicity of its styling and blue anodised finish. The vertical (pitch) rotating arm has a strong spring-loaded fixing pin to stop the camera drooping under its own weight.

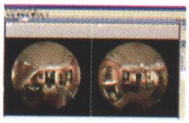
A double-sided brass detent wheel provides two sets of click stops for yaw (horizontal spin). Ours had eight and ten stops, but others can be ordered. With our 14mm lens and EOS 10D, eight shots cover the complete 360 degrees with enough overlap for Stitcher to work on. For a three-row spherical set, that means 24 images per set, plus one pointing up and one down.

The head is very accurate, although minor adjustment was still needed in Stitcher for the down-pitching row – apparently because the camera body isn't perfectly aligned with its own sensor.

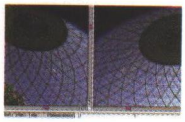
alternatives



iSeeMedia Photovista 3



EasyPano PanoWeaver 4.0



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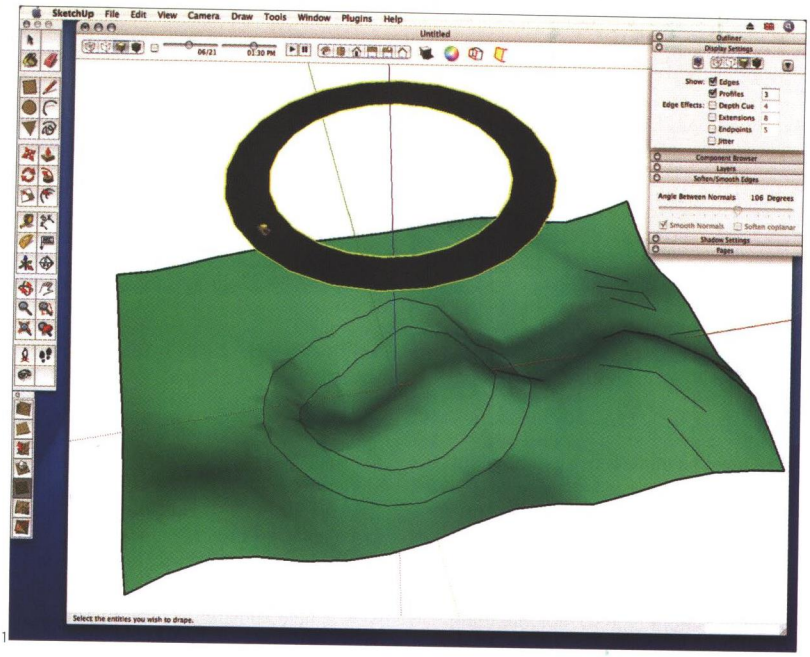
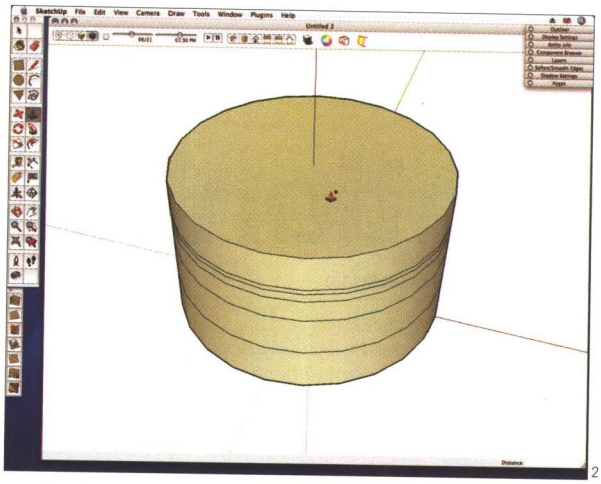




SketchUp 5

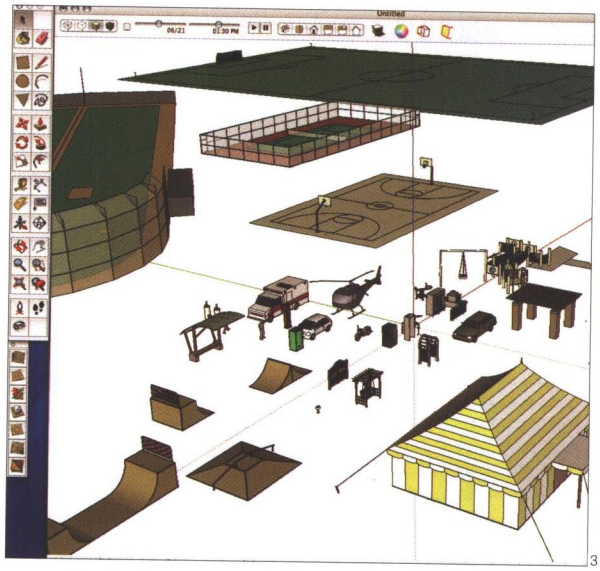
3D sketching software

format Mac OS X 10.3/4, Windows NT4/2000/XP
price £315 plus VAT, upgrade £60 plus VAT
company @Last Software, *www.sketchup.com*
contact @Last Software, *020 8434 0518*
minimum specs Power PC G4 400MHz/Pentium III 600MHz processor, 128MB RAM, 80MB hard disk space, Open GL-compliant video card

pros ***Offers powerful and accurate polygon modelling in a single 3D view. Perfect for fast, no-frills realization of objects in 3D***

cons ***Doesn't handle curvy objects well, though the Sandbox tools help here.***

Digit Rating ★★★★☆ DIGIT BUY



SketchUp is a focused and excellently crafted 3D program designed primarily with the architect in mind. The original incarnation of the program was a sketching tool that allowed designers to realize objects in 3D quickly and with the minimum of fuss. It's not a CAD program as such, as it's based on polygon modelling and OpenGL rendering.

As the program has matured and expanded its feature set, it has also widened its appeal to more general-purpose 3D work, though it's still best suited to building hard mechanical objects such as buildings and machinery. It doesn't have subdivision surfaces, NURBS, or other parametric fussiness. The power of its simple polygonal toolset comes mainly from the inspired inferencing system, snapping and referencing features that allow you to construct freely in a single 3D view with a great degree of accuracy and confidence.

Version 5 moves the polygon tools into the organic realm for the first time with the introduction of the Sandbox tools – a plug-in system designed for creating and sculpting landscapes. The Sandbox offers a number of extra tools than can create surfaces from a series of contour lines (as traced from a map, for example) or push and pull a flat mesh into a rolling hillside.

The interface has been adjusted slightly so that it is the same on both Mac and Windows platforms. Palettes now compact down to their tool bars and snap together as a block, popping out to full size as needed. A new component browser panel allows easy navigation of objects in the scene. A neat feature is Replace Selected, which replaces the selected components in the scene with those from the Component Browser – making it easy to change the windows in a building en masse. One of the great things about Sketchup is that you can download a vast number of totally free ready-made models to place in your scene. Categories include Architecture, Construction, Film and Stage, and Mechanical Design.

Other improvements include the Push-Pull tool. This has an Add mode so you can create multiple extrusions in a few clicks. The display modes have been augmented with additional edge rendering options including Depth Cue and Endpoints.

SketchUp is a novel and well-designed tool for speedy visualizations. It can handle full-on modelling if you push it to the limit, as many advanced users do. SketchUp is recommended to those new to 3D modelling, architects, or practiced 3D artists looking for a secondary modelling tool.

Simon Danaher

1. ***Sandbox offers a number of tools for sculpting and modifying more organic objects such as landscapes.***

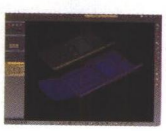
2. ***The Push-Pull tool now lets you make a series of extrusions by holding down the Alt key activating Add mode.***

3. ***You can download a bewildering number of low and medium resolution objects for free from @Last's Web site to be added to your scenes.***

alternatives

Alias SketchBook Pro 2

Artifice Design Workshop



Eovia Amapi 7

MotionBuilder 7

Character-animation software

format Mac OS X 10.3, Windows XP

price Node-locked Standard version £645, MotionBuilder Pro 6 £2,725 for node-locked licences and £3,115 for floating licences

company Alias, *www.alias.com*

contact Alias, *01494 441 273*

minimum specs PowerPC G4 or Pentium III processor, 256MB RAM, Open GL graphics card with 32MB of RAM, 600MB hard drive space

pros ***Character Extensions, FK effectors, Pose and Keying enhancements, Keying groups, plus new constraints compatible with Maya 7 and updated FBX Plug-ins***

cons ***Focus on Maya integration, workflow and interface enhancements makes for a more complicated application. Authorization and licensing process is rather complicated, and the application is relatively expensive.***

Digit Rating ★★★★☆

Since its inception, MotionBuilder has always been seen as an add-on to other 3D applications, in much the same way Character Studio was to 3DS Max. When Kaydara bought the application, it veered towards becoming more of a 3D storyboarding application, but now Alias has firmly steered it back to the role of character animator as part of a bigger workflow.

The process is straightforward. You create the character model with bones in your normal application, export it as a FBX file, and open it in MotionBuilder. The application ships with a number of updated FBX plug-ins so you can transfer your work with ease. You then characterize the model – adding a structured template to it that MotionBuilder understands. You then add a control rig (with enhanced visual feedback in this version) for working with keyframe animation. The software can import and retarget motion capture information, and makes use of a sophisticated Story window to combine and apply motion clips to form new animation tracks. The finished result is then plotted to your model and exported out of the application.

Many of the new features in MotionBuilder 7 concern fitting the application into a production pipeline workflow. One such area of improvement is constraints, enhanced in this version to be more compatible with Maya 7. New simple constraints include Aim, Chain IK, and Scale, while other enhancements include new offsets, additional properties in the Properties window, and changes to the Parent-Child and Rotation constraints to make them more Maya-compatible.

FK forever

Individual FK effectors can be controlled in all keying modes, to allow more precise control over body-part manipulations, while integrated full-body manipulation and body-part pinning, formerly confined to IK effectors, is also now possible.

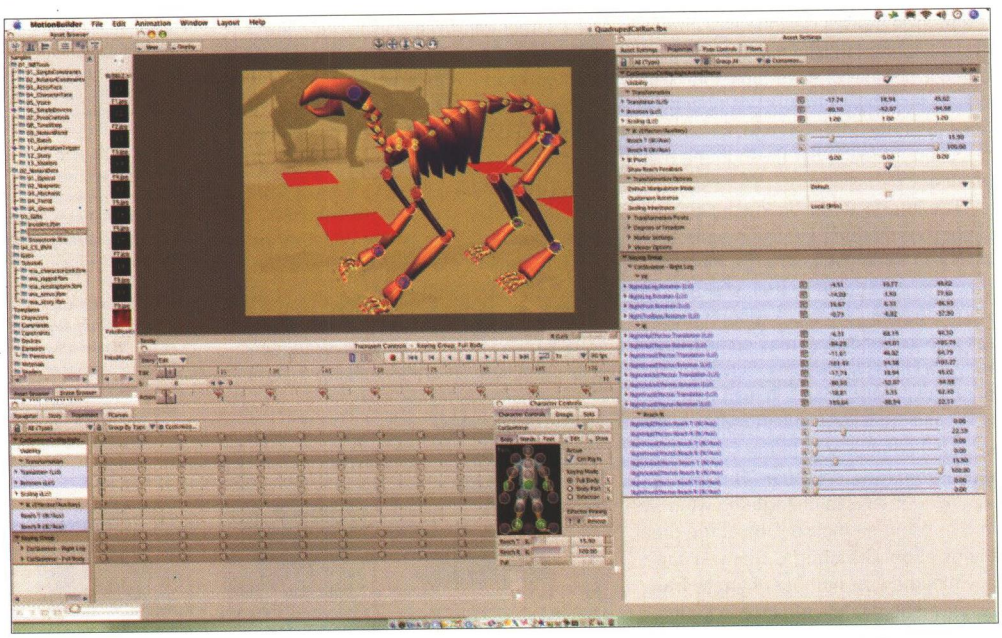
Character Extensions are a key new feature, enabling you to associate any type of object as a child of your character. This is obviously a major bonus for game developers and others as you can now add an extra limb that moves naturally with the rest of the body. A weapon can be carried throughout any

alternatives

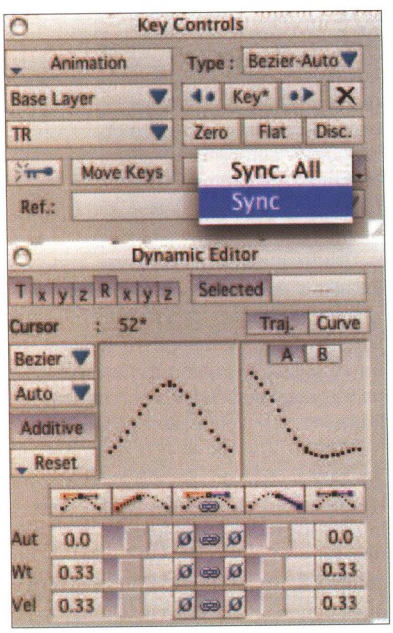
Character Animation Technologies CAT 2

Hash Animation:Master version 11.0

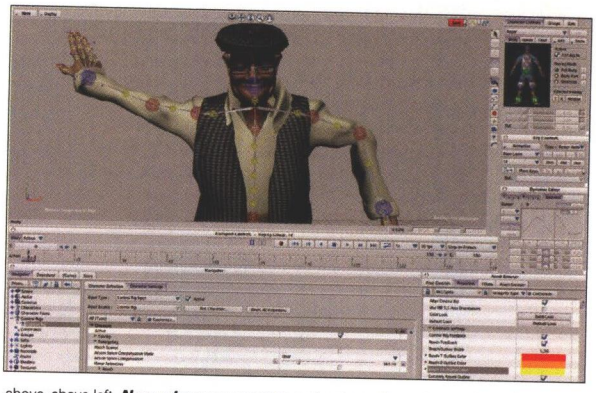
pmG Worldwide Messiah:animate 4.0



above. ***A new group of properties called Keying Group that affect the translation, rotation, and reach of the selected effector or effectors, is displayed in the Properties, Dopesheet, and FCurves windows.***



above. ***A Sync menu in the Key Controls window, lets you select between Sync and Sync All options.***



above, above left. ***Now when you want to animate a character, coloured feedback elements on Control rigs help you identify which part of the rig you are working with, how your character is moving, and how it is affected by manipulations over time.***

of the poses, or you can have something as ordinary as a spotlight follow the character around. Actors, which are animation control sources for motion capture or data input, have also seen an enhancement to spine mapping behaviour. This is available in the Pro version only.

Animating characters really is easy in MotionBuilder 7. You can set up a variety of poses and save them to make them available in the Pose Browser. Clicking on any of these automatically poses your character. By default, the translation and rotation of the pasted pose will match the translation and rotation of any selected effector on the current character.

Once you have your poses sorted you just double-click to apply them to the model at keyframed intervals, switch on a Mirror function and do it again to quickly build up a complete walk cycle. A new Gravity option ensures that the feet stay at the original level of the pasted pose (normally floor level), but as the movement may be a bit erratic and the feet may slide on the floor, you can smooth it out by adjusting the animation's function curves in the FCurves window.

Walk the walk

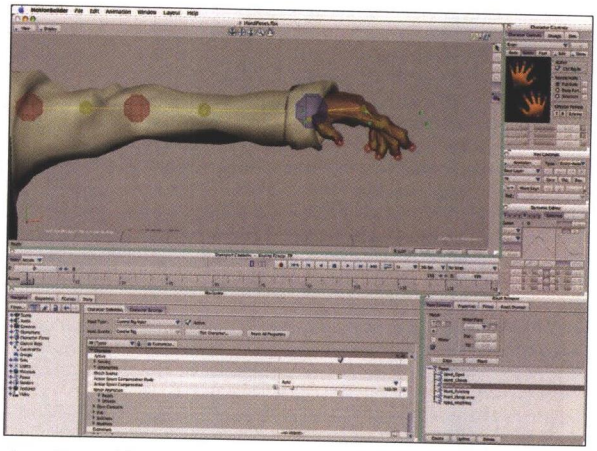
Character animation can be loaded and saved via a new File menu in the Character Controls window. You can choose to save the character animation alone, or you can save the Control Rig and Character Extensions as well as the animation. Selected takes can also be saved individually.

You can, of course, also build up walk cycles using the timeline-based Story window controls. This powerful component of MotionBuilder hasn't really changed in version 7.0, but you are now able to animate Character Extensions like any body part, as well as animate them in isolation. Other new enhancements concern follow-handles, views, and selection tools that, combined with several interface tweaks, lend MotionBuilder a more sophisticated workflow. The flipside of this is that MotionBuilder no longer feels like the simple tool of old.

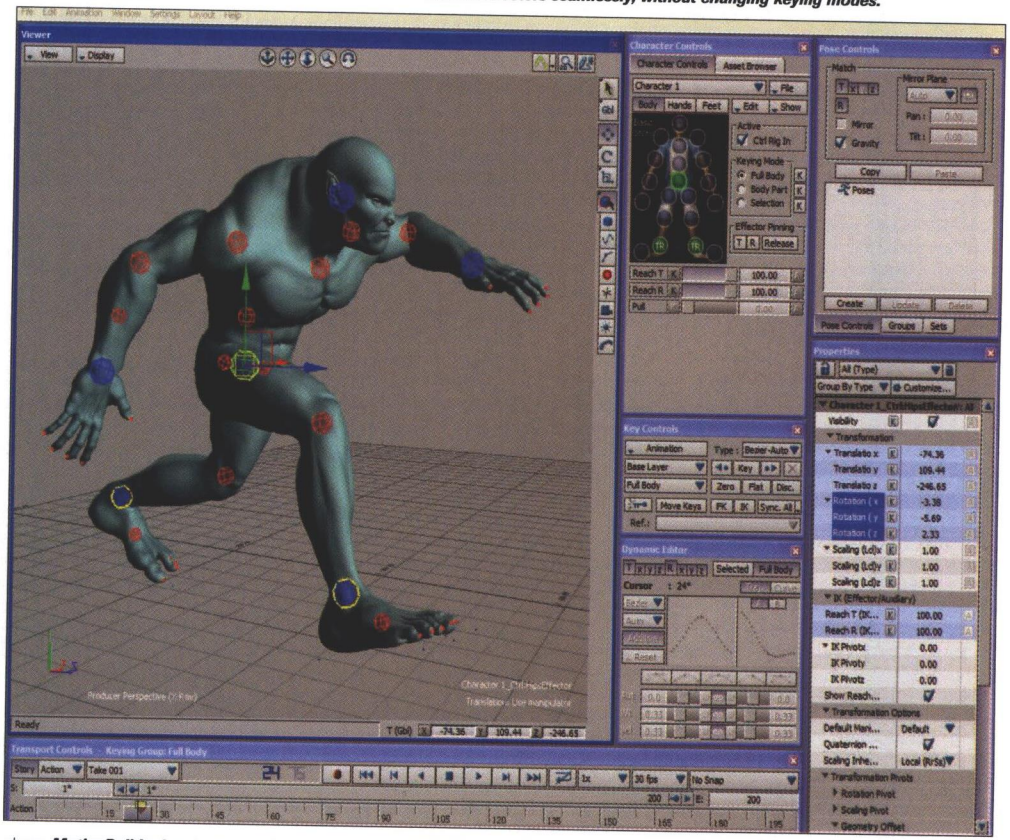
While always powerful, it was previously deceptively so. This new version adds power and control, but also complicates things for the beginner. It would be a good idea to get hold of the free PLE version first, to get to grips with the program. Many new features are designed to let MotionBuilder slot into existing 3D pipelines, so the release will be popular with studios with an established workflow.

The licensing process is a bit of a nightmare – this seems to be a problem with all high-end 3D applications. While the need for machine-specific licensing is understandable, this was a fairly tortuous process – even with the Mac version. That aside, the Character Extensions, Pose enhancements, visual feedback, and save-&-load character animation features alone makes this a worthwhile upgrade.

Michael Burns



above. ***MotionBuilder 7 gives you access to all FK effectors (including all spine and finger effectors) in any keying mode, which lets you manipulate both IK and FK effectors seamlessly, without changing keying modes.***



above. ***MotionBuilder has become a lot more complex in version 7, but the level of control the user has over the animations is fantastic. Great for the professional, but a beginner will need some time to get to grips with it.***

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FlightCheck Studio

Preflighting software

format Mac OS 9.2/X 10.2/3/4
price £99 plus VAT
company Markzware, *www.markzware.com*
contact Markzware, *0031 70 307 2977*
minimum specs Power PC G3, 256MB RAM, Quark 4/5 (under OS 9), Quark 6/InDesign CS/CS2 (under OS X)

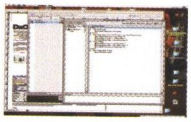
pros ***Inexpensive, and has the ability to save parameters. Opens external applications automatically and offers great customization.***

cons ***Complex, with a steep learning curve. Takes a long time to set up properly.***

Digit Rating ★★★★☆ DIGIT BUY

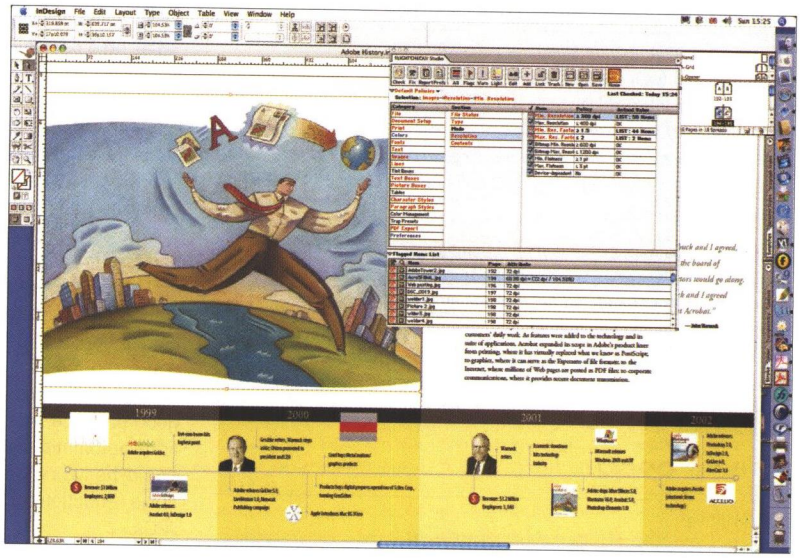
alternatives

Badia Printools



Extensis Preflight Pro

Markzware FlightCheck Professional 5



Above. ***You can save FlightCheck "Policies" – sets of parameters that you apply to your documents – so that regular checks can be applied to multiple documents.***

Designers love new bells and whistles in their tools. Adobe opened the DTP equivalent of Pandora's Box when it added transparency to InDesign, and suddenly magazine designs were filled with drop-shadows and fancy overlay effects.

With all this new power came unprecedented levels of document complexity. Drop-shadows and weird skew effects may look cool, but they can be a nightmare for repro houses. Markzware has been nipping such problems in the bud with its FlightCheck software for years – and now its caught up with InDesign's feature list.

FlightCheck Studio operates as a plug-in for both InDesign and QuarkXPress 4.x, 5.x and 6.x – unlike the standalone Professional and Designer versions. Functionality is identical (though application-specific) for both QuarkXPress and InDesign versions, so we'll concentrate on the latter here.

The tool can perform checks at a number of stages – when creating a new document, opening an existing one, saving, exporting, packaging, and printing. In practice, you may find that you only want to check when exporting and packaging, but the other options are useful when sharing documents in a workgroup.

The two-paned window is complex but thorough, showing all elements that the tool will check in a columned, drill-down style interface. There are hundreds of these – and all are customizable, so take some time to wade through them. The first time you check a document, pretty much everything will be flagged – most of it unnecessarily – and it'll take ages to go through the report.

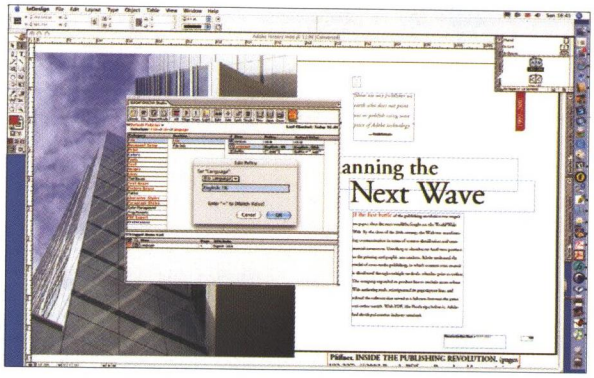
Editing a parameter (Markzware calls them Policies) is a simple matter of double-clicking it and entering a new value. This is where you'll spend most of your time initially, fine-tuning settings for your way of working. Policies can be saved, too – a great idea, because sets can be created for different types of document and then distributed to everyone in the studio.

Problem solved

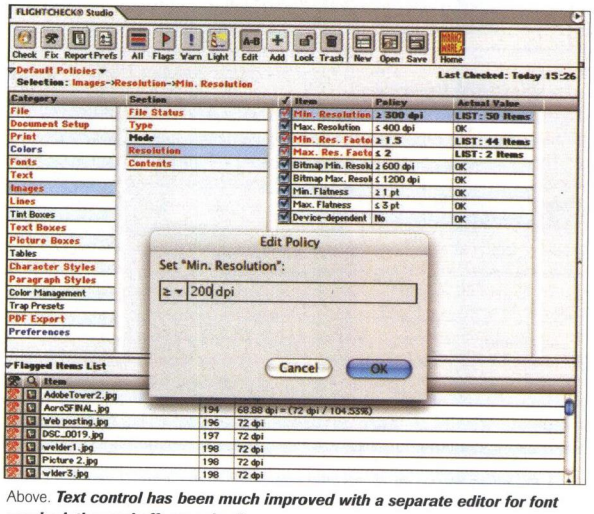
Documents are checked quickly – and after the familiar squawk, problem areas are highlighted in red in the top half of the interface. Clicking one of these displays the specific page-level objects in the lower pane. These can then be highlighted on the page, or fixed – FlightCheck Studio automatically opens the correct dialog or external editing program, complete with problem object.

Preflighting is an essential part of working in design – and FlightCheck Studio, by virtue of its monolithic set of checks, should also be an essential part of your workflow. It may be complex, but let's face it – so are your designs.

John Steward



Above. ***Policies are simple to edit, so you can customize your preflight to your work's specific needs.***



Above. ***Text control has been much improved with a separate editor for font manipulation and effects selection.***

DxO Optics Pro 3.0

RAW file converter and enhancement software

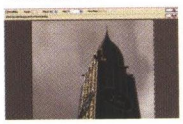
format Mac OS X 10.2/3/4, Windows 2000/XP
price Standard (with one lens module) £85 plus VAT, Elite (with one lens module) £128 plus VAT, additional lens modules from £22 plus VAT
company DxO Labs, *www.dxo.com*
contact Sangers, *0870 444 0003, www.sangers.com*
minimum specs Pentium III/PowerPC G4 or G5 processor, 512MB RAM (Elite requires 1GB RAM)

pros ***Extensive optical correction, optimized shadow and highlight detail, plus intelligent exposure compensation. Full auto option allows batch processing, but full and partial manual control is also available.***

cons ***Pick and mix of lens modules is limited and potentially expensive for owners of large professional camera systems. An improved browser could make the image selection process more efficient.***

Digit Rating ★★★★☆

alternatives



Adobe Photoshop CS 2

Pixmantic RawShooter

Power Retouche Lens Corrector

After uploading your images taken with your digital SLR, just imagine how useful it would be to be able to convert and process each RAW file automatically, in batches, while at the same time correcting for various optical deficiencies of the lens used. This is exactly what DxO Optics Pro 3.0 promises to do.

The software can automatically optimize corner shading, barrelling, and pincushion distortion, as well as softness from image blur. Advanced optical engines, mathematical modelling, and extensive hardware testing by the software's developers have created a good package, and this latest release adds automatic optimization of exposure and dynamic range, as well as powerful noise reduction for both RAW files and JPGs.

DxO claims speckling caused by noise is reduced by up to two-stops (EV) in quality without losing detail. It's a tempting option for those habitually pushing camera sensitivity to the limit, but it's equally appealing for everyday use too.

Two versions are offered, both using the same technologies and features. The standard version is compatible with the majority of entry-level and mid-range digital SLRs, including the Nikon D70s and EOS 350D, whereas the Elite option adds support for all those top-flight pro-cameras, such as those from the Canon EOS 1D range and Nikon's D series.

To gain the benefits of optical correction, just one lens module is supplied free, and it's dedicated to a particular lens and camera body. Additional lens modules are required for different combinations, and can be downloaded for a fee.

If you have several different camera bodies and a selection of pro-lenses, this can work out to be quite expensive. Lenses and new camera bodies are being added all the time, and DxO has promised support for the new EOS 5D, but there are still numerous body and lens combinations that aren't yet fully supported.

Correction school

The workspace is bland, but intuitive. It offers three levels of control – fully automated batch correction, key controls only, or manual selection of all available features for individual images. Simple sliders operate most of the expert enhancement and correction features, so it doesn't take too long to get the hang of it.

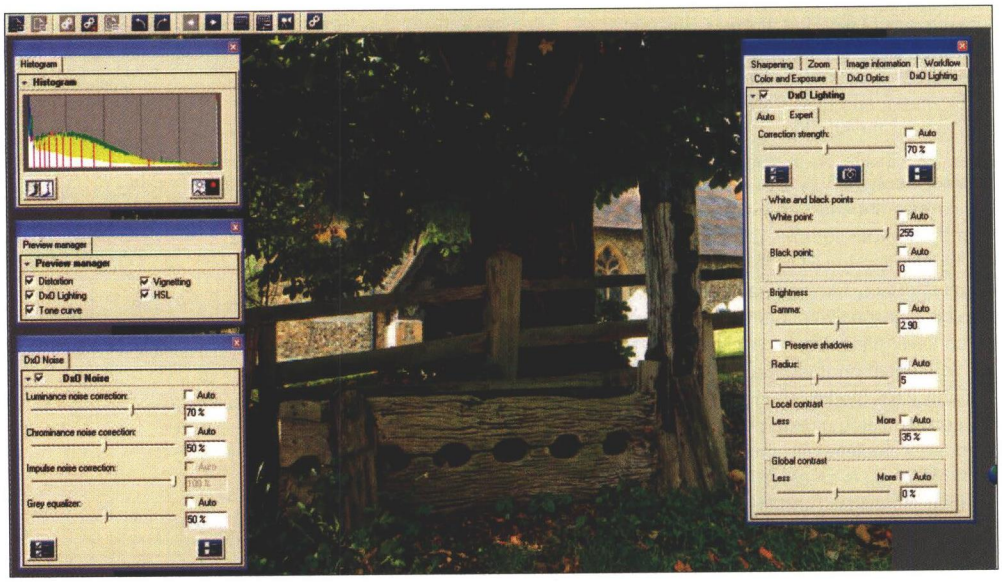
RAW files and JPGs from various supported camera bodies and lens combinations can be included in the same batch, and compensated for automatically. It's all incredibly slick and fuss-free.

While a number of older plug-ins and even the latest version of Photoshop allow a similar level of control, most require time-consuming manual input. Optics Pro can generally be left alone to do all the hard-work, allowing for the processing of large quantities of files with minimal input from the user. Optics Pro's greatest appeal lies in its simplicity of workflow for automated batch-processing. For this task, DxO Optics Pro 3.0 is the most comprehensive and accomplished software available.

Joanne Carter

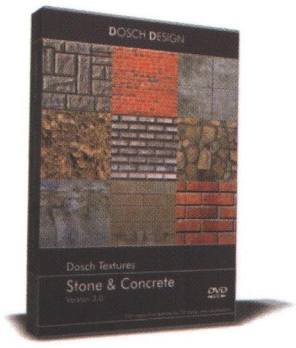
supported models

Standard: Canon EOS 300D, EOS 350D, EOS 10D, EOS D60 (no RAW support), EOS 20D, Konica-Minolta Dynax 7D, Minolta A2 (no RAW support), Nikon D50, D70, D70s, D100 (no RAW support), D2H (no RAW support), Sony DSC-F828 (no RAW support) ***Additional supported models*** - Elite: Canon EOS 1D Mark II, Canon EOS 1Ds, Canon EOS 1Ds Mark II

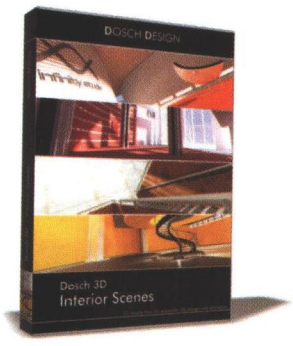


above. ***Providing you've purchased the relevant lens modules, Optics Pro's fully automatic mode scans the metadata and applies all the specific corrections depending on the camera and lens in use. The expert mode offers as much automation or control as you as want. Plus there are a number of customizable options and presets for batched processing.***

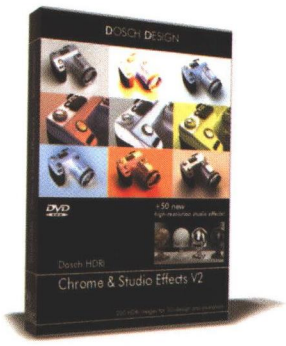
DOSCH DESIGN



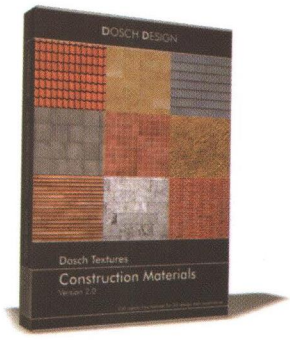
Dosch Textures:
Stone & Concrete V3



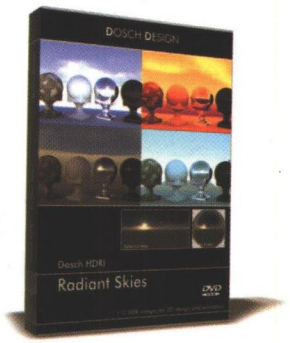
Dosch 3D:
Interior Scenes



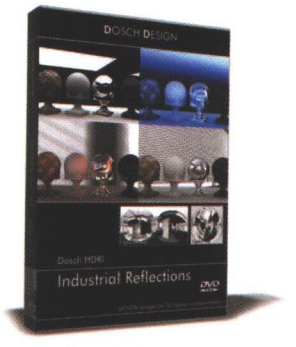
Dosch HDRI: **Chrome & Studio Effects V2**



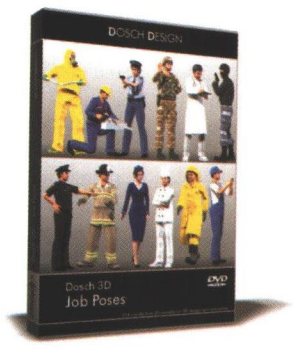
Dosch Textures:
Construction Materials V2



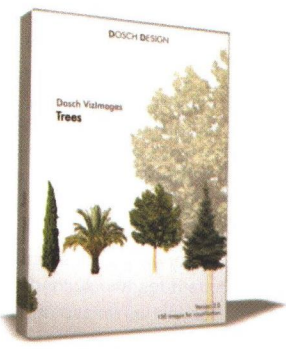
Dosch HDRI:
Radiant Skies



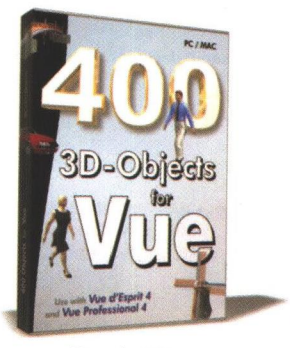
Dosch HDRI:
Industrial Reflections



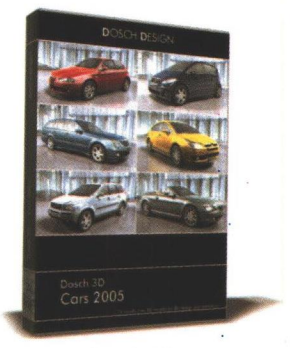
Dosch 3D:
Job Poses



Dosch Viz-Images:
Trees



Dosch 3D:
400 Objects for VUE



Dosch 3D:
Cars 2005

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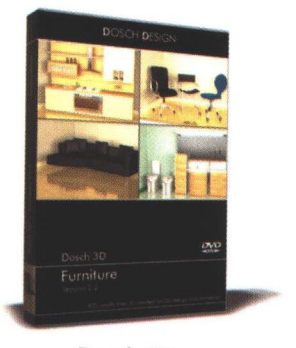
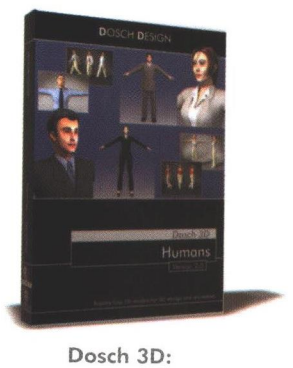
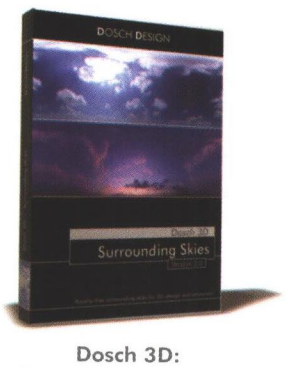


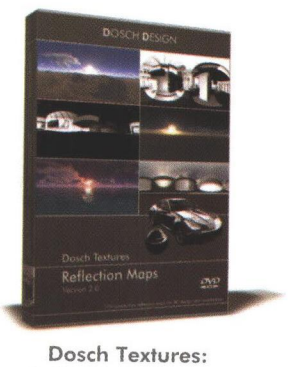
Dosch 3D:
Furniture V2.2



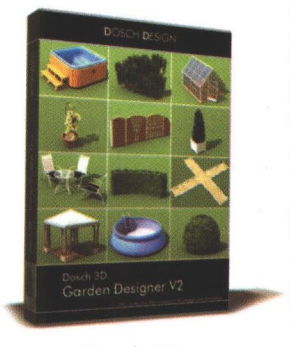
Dosch 3D:
Humans V2



Dosch 3D:
Surrounding Skies V2



Dosch Textures:
Reflection Maps V2



Dosch 3D:
Garden Designer V2

3D-Design, Animation, Visualization

Besides complete 3D-models and scenes **▸Dosch 3D**, Dosch Design products contain surface materials **▸Dosch Textures**, High Dynamic Range Images **▸Dosch HDRI**, as well as 2-dimensional objects for architectural visualizations **▸Dosch Viz-Images**.

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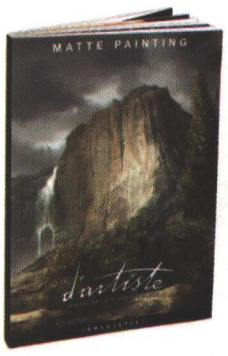

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info@doschdesign.com

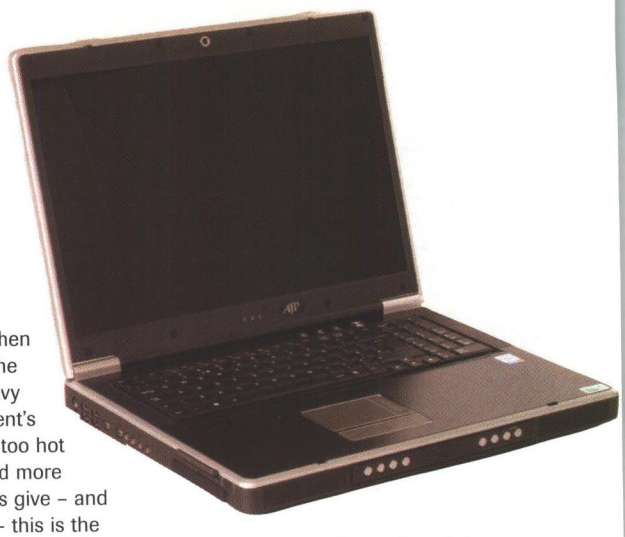
www.doschdesign.com

D900T-U

17-inch laptop

format Windows XP/64
price £1,599 plus VAT
company AJP, *www.ajp.co.uk*
contact AJP, *0208 9744*

pros ***Powerful enough to challenge some desktops.***
cons ***Much bigger and heavier than most laptops.***
Digit Rating ●●●●○



"Laptop" and "notebook" are misleading words when it comes to describing the D900T-U. It's too big and heavy to be whipped out at a moment's notice – and it certainly gets too hot to put on your lap. If you need more power than traditional laptops give – and you only move desk to desk – this is the best 'portable' model we've seen so far.

For a computer of this build to be worthwhile, it must be stuffed with the much more powerful components than you can get with a Pentium M-based unit. Thankfully, this version of the D900T features a fast desktop Pentium 4 processor and a workstation-standard 2GB of RAM. This allows it to barrel through our Photoshop CS 2 test in four minutes two seconds – almost twice as fast as its average competition back in April (though we were using the CS version back then). It's also respectable when compared to the graphics workstations reviewed on page 108.

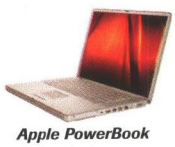
The D900T-U also set a quick pace through our LightWave-based image rendering test, completing it in a swift 32 minutes 50 seconds. Its 3D graphics performance isn't as impressive as we'd expect from the mobile version of the GeForce 6800 Ultra (3D heads may prefer the optional Quadro FX Go 1400 chip instead). The unit's Cinebench score of 2552 is mitigated by the high-resolution of the 17-inch screen, which looks great thanks to a glossy black coating.

Both the 100GB drive and dual-layer DVD±RW drive are available on smaller units – though the second (currently empty) drive bay isn't. The speaker system, which includes a subwoofer, is also much better than a laptop. We had a few problems with the unit not recognizing external drives, but this was fixed with a driver reinstall. Windows XP Pro would be preferable to the installed XP Home (though it's good that XP 64 is an option) – but the D900T-U shows why bigger is sometimes better.

Neil Bennett

alternatives

Alienware MJ-12M 7700



Apple PowerBook G4 17-inch

Sony Vaio A397XP

specifications

CPU: Pentium 4 660 (3.6GHz) ***RAM (standard/max):*** 2GB/2.8GB ***Front-side bus:*** 800MHz ***Screen:*** 17-inch ***Aspect ratio:*** Widescreen ***Resolution:*** 1,680-x-1,050 ***Graphics chip:*** NVidia GeForce Go 6800 Ultra ***Graphics RAM:*** 256MB ***Hard disk:*** 100GB ***Optical drive:*** dual layer DVD±RW ***Battery life:*** 1.5 hours ***Dimensions:*** 397-x-298-x-49.5mm ***Weight:*** 5.2kg

DVR-110D

DVD±RW drive

format Mac OS X, Windows 2000/XP
price £34 plus VAT
company Pioneer, *www.pioneer-eur.com*
contact Pioneer, *01753 789 500*

pros ***Fast dual-layer DVD burning. Single layer disc burning better than average.***

cons ***Slow DVD+RW creation. Mediocre DVD-RW burning speed. More expensive than the competition.***

Digit Rating ●●●○○

As is the standard now, Pioneer's new DVR-110D burns DVD-R and +R discs at 16x speed. Taking six minutes and three seconds on average to create a DVD-R disc, Pioneer's drive is slightly faster than the average internal drive. The same applies to DVD+R creation, which the DVR-110D performed in five minutes and 55s.

Dual- and double- layer DVD creation has become increasingly popular as speeds and especially reliability have improved over the last year – and prices of media have dropped. DVD+R DL (double layer) and DVD-R DL (dual layer) discs can fit up to 8.5GB of data on them. The DVR-110D took 18 minutes exactly to create a DVD+R DL disc and 18 minutes and 22 seconds to create a DVD-R DL disc. These are impressive times – the -R DL speed is the fastest we've seen – but the +R DL score is still over two minutes slower than Plextor's PX-740A.

The DVR-110D's took almost twice as long to burn a DVD+RW (14 minutes and 10 seconds) than the leading LG GSA 4163B drive. The Pioneer drive's DVD-RW creation time of ten minutes and 14 seconds is better, but within a few seconds of many other drives.

This unit is also mediocre at CD burning, as its 40x speed leaves it minutes behind most 48x speed models.

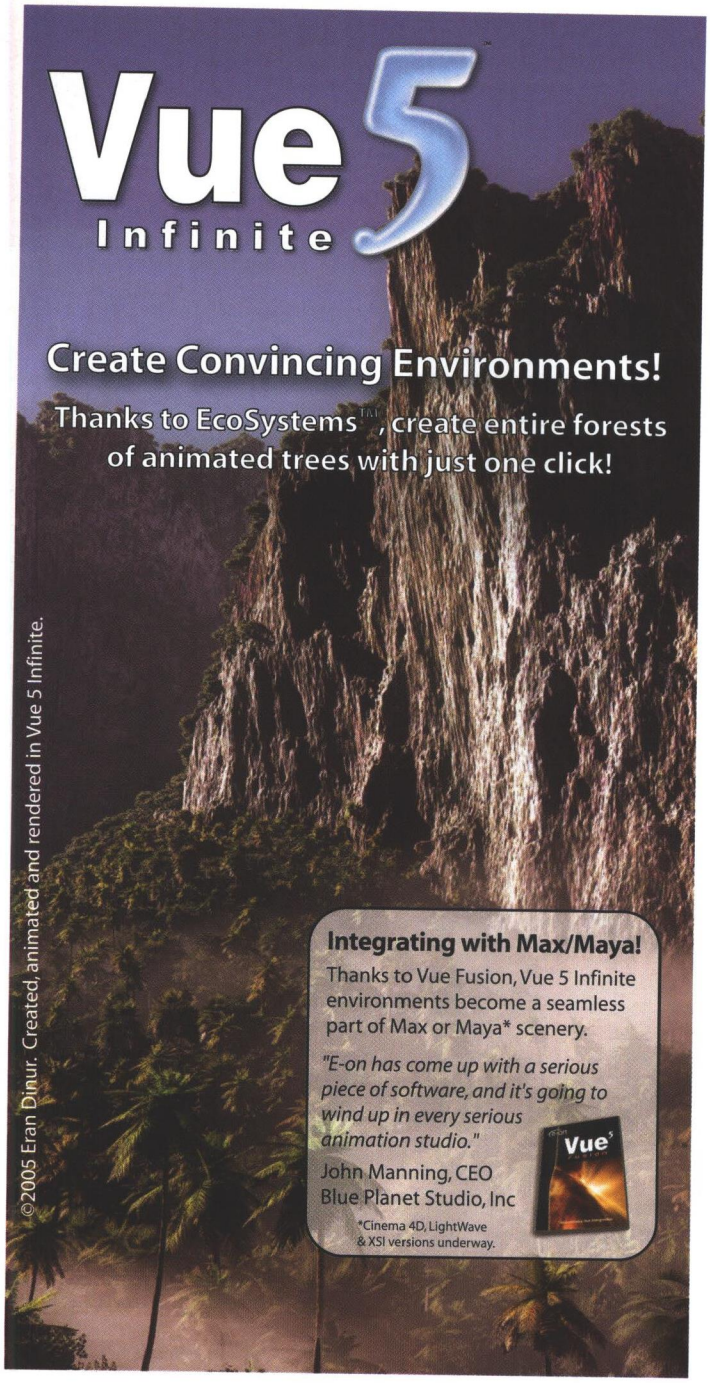
The DVR-110D is truly nothing special. Compared to our leading model, NEC's ND3540, Pioneer's drive is slightly faster at the creation of DVD+R, DVD+R DL, DVD-R DL and DVD-RW discs - though slightly slower with DVD-Rs, and much slower with DVD+RWs.

For most users though, there's nothing between them technically – they even share the same Nero 6 software – so we'd plump for the ND3540 as it's a fiver less expensive.

Neil Bennett

specifications

Write speeds – DVD-R: 16x ***DVD+R:*** 16x ***DVD-R DL:*** 8x ***DVD+R DL:*** 8x ***DVD-RW:*** 6x ***DVD+RW:*** 8x ***DVD-RAM:*** n/a ***CD-R:*** 40x ***CD-RW:*** 32x ***Read speeds - DVD:*** 16x ***DVD-R:*** 40x ***Buffer size:*** 2MB ***Interface:*** E-IDE ***LightScribe:*** no ***Windows software:*** Nero 6 OEM ***Mac software:*** None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Integrating with Max/Maya!
Thanks to Vue Fusion, Vue 5 Infinite environments become a seamless part of Max or Maya* scenery.
"E-on has come up with a serious piece of software, and it's going to wind up in every serious animation studio."
John Manning, CEO
Blue Planet Studio, Inc
*Cinema 4D, LightWave & XSI versions underway.

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3DWorld Magazine #66

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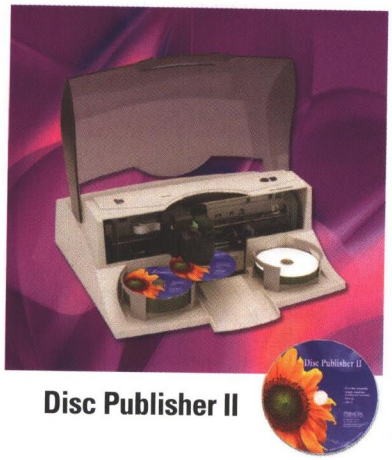

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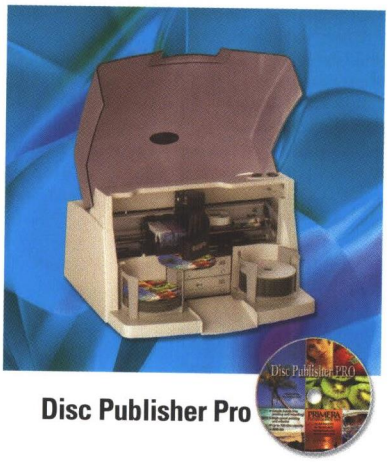
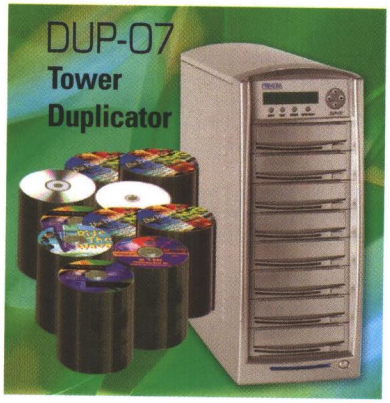


Disc Publisher Pro

Print & Burn Loads of CDs & DVDs

- 100-Disc Capacity
- Two CD or DVD/CD Drives
- 4800 dpi Inkjet Printing
- USB 2.0 Connection
- Network Capable
- Professional Software for W2K, WXP, Mac OS X included



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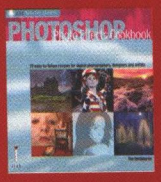


THIS ARTICLE WAS EXTRACTED FROM
Photoshop Photo Effects Cookbook by Tim Shelbourne – a Digit highly recommended read – available now at a retail price of £17.95 from ILEX, the digital creative's publisher of choice.

Photoshop Photo Effects is a comprehensive practical handbook aimed directly at serious amateur photographers, students, graphic designers, and semiprofessionals – indeed, at anyone working with photographic images. It provides a systematic guide to using Photoshop to correct and enhance the exposure, contrast, tonal values, and colour balance of photographic images.

Digit has teamed up with the digital designer's publisher of choice The Ilex Press to offer readers a fantastic discount on their latest titles, including *Photoshop Photo Effects Cookbook* for £17.95. To order your copy with a 20 per cent discount and free P&P (usually £3.50) giving you a saving of £7, visit *www.ilex-press.com/digit* to benefit from this great offer, as well as for more information about other new and exciting Ilex titles. Alternatively, write to Digit Offer, ILEX Press, 3 St Andrews Place, Lewes, East Sussex BN7 1UP or phone *01273 487 440*.

ILEX

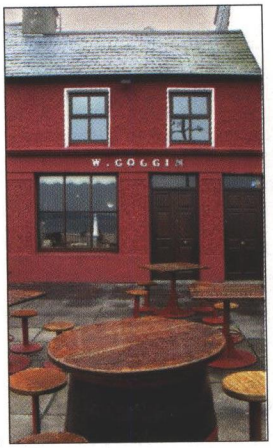
PROFESSIONAL DESIGN TECHNIQUES FOR DIGITAL ARTISTS

#15 PHOTO EFFECTS COOKBOOK

NATURAL WORLD

Simulating rain

Hands up, anyone who wants to stand in the rain on a cold gray day with an expensive digital camera? No takers? It's hardly surprising – there are some aspects of nature that we may wish to capture on camera, but without enduring the misery of the actual experience. Rain isn't difficult to simulate in Photoshop. The Noise filter plays a major role in the process, providing exactly the kind of random factor that this subject demands. The part of the wind, driving the rain across the image, is played by the Motion Blur filter, and a simple layer blending mode adds the required subtlety.



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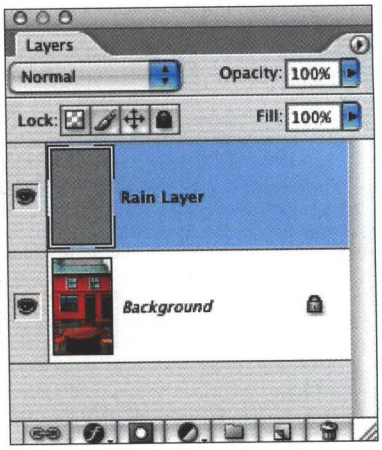

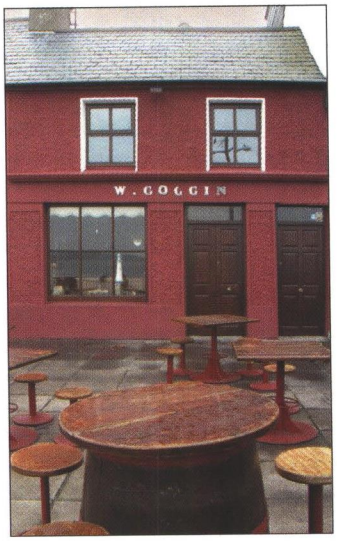

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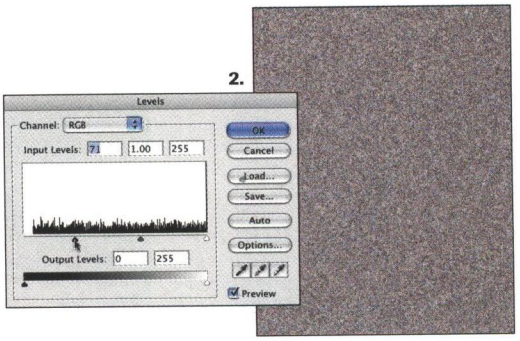
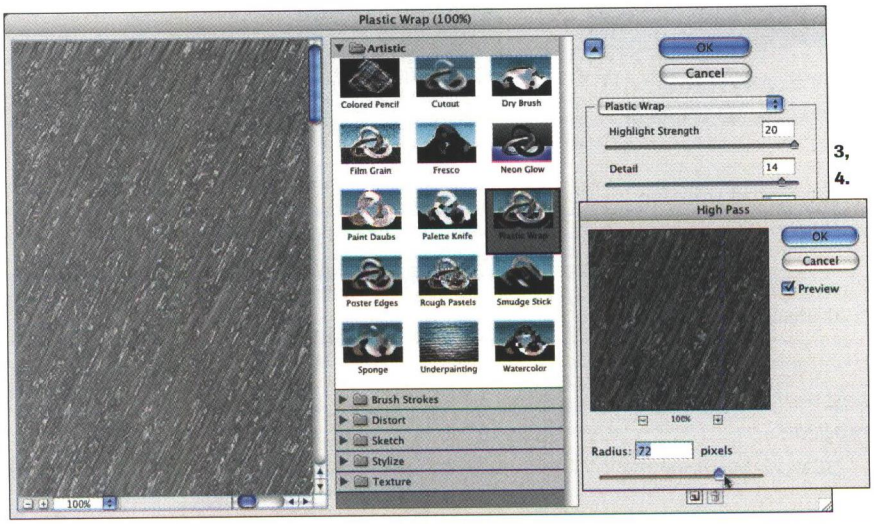




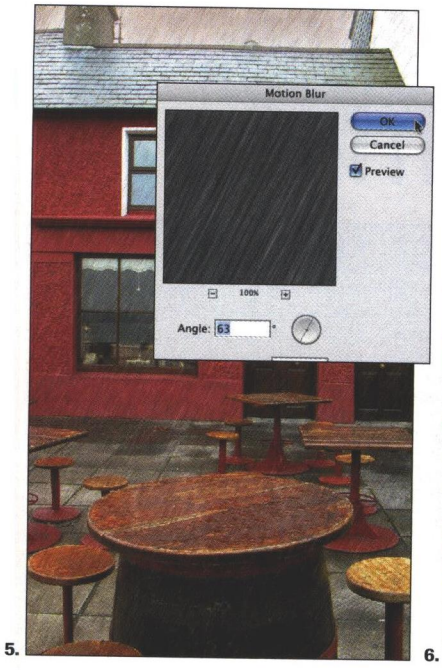
3, 4.

1. Open a suitable image for the rain treatment. Hit **Ctrl/Cmd+D** on the keyboard to revert to default foreground and background colors. Add a new layer **(Ctrl/Cmd+Shift+N)**, call it "Rain Layer," and fill it with white using **Edit > Fill > Use: White.** Go to **Filter > Noise > Add Noise.** Use an Amount of 95, Uniform and Monochromatic.

2. The noise is a bit too dense, so go to **Image > Adjustments > Levels.** Drag the Black Point slider to the right until the Input Value reads 71. This will increase the contrast of the Noise layer and thin out the speckles.

3. Blur this Noise layer a little with **Filter > Blur > Gaussian Blur**, using a Radius value of 0.5 pixels. To add the effect of driving rain, go to **Filter > Blur > Motion Blur**, choosing an Angle of 63 and a Distance of 49 pixels.

4. The Plastic Wrap filter adds a little more variety to the rain pattern. Go to **Filter > Artistic > Plastic Wrap.** Use the following settings: **Highlight Strength 20, Detail 14, Smoothness 3.** Feel free to experiment with various settings, but these perform well. Now go to **Filter > Other > High Pass**, using a Radius of 72 pixels.



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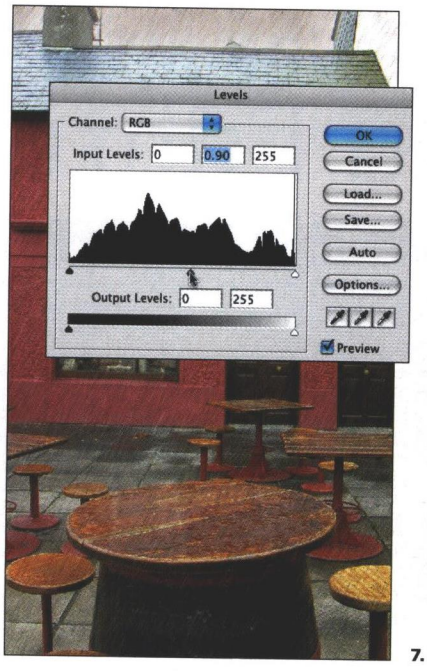

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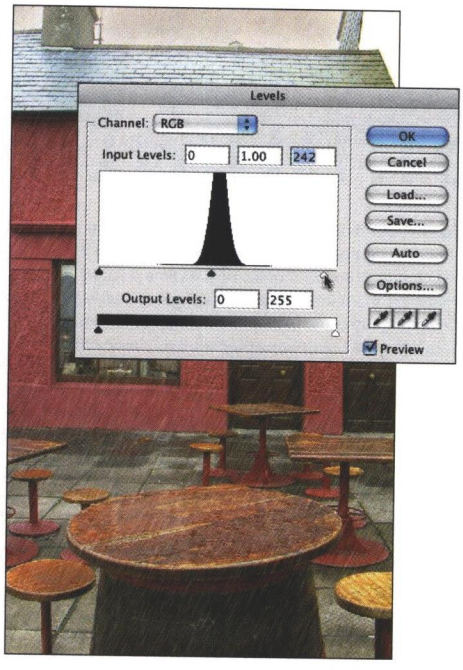

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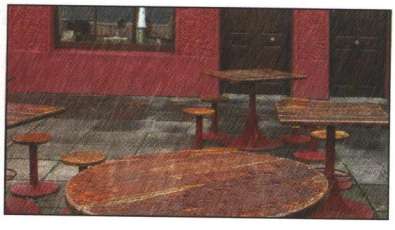

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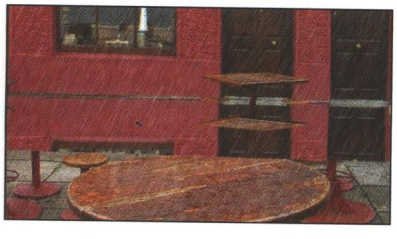

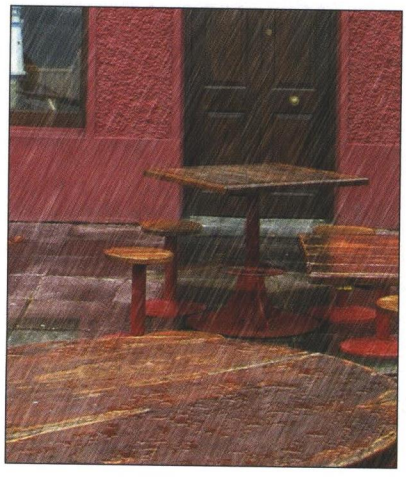

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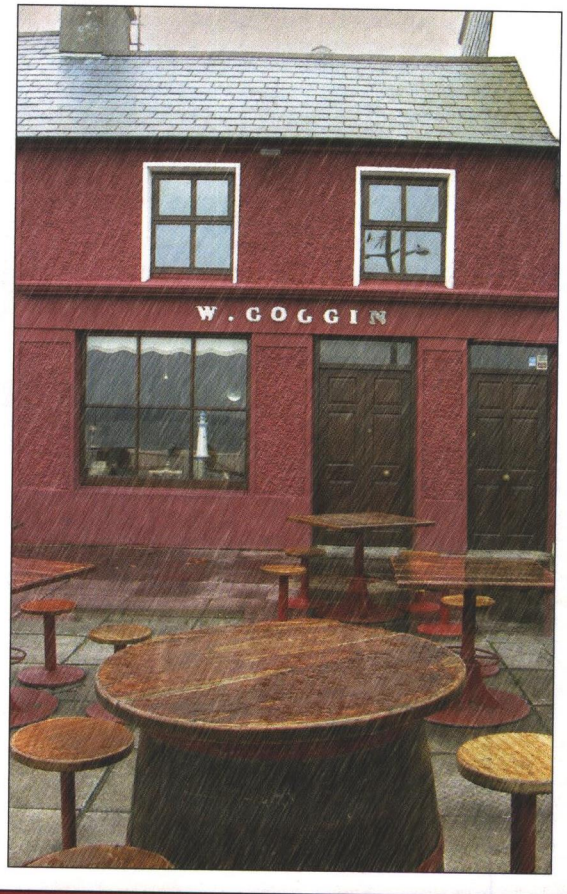


5. Re-apply the Motion Blur filter, with the settings from the previous step, and set the blending mode for the Rain layer to Hard Light.

6. Click on the background layer and go to **Layer > New Adjustment Layer > Levels** and click OK. We need to darken the image a little to intensify the Rain layer, so drag the midpoint slider to the right a little.

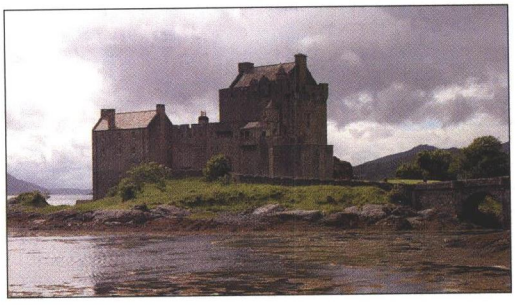
7. Return to the Rain layer and go to **Image > Adjustments > Levels.** Drag the White Point slider to the left a little to increase the brightness of the rain itself.

8. For the reflections, choose the Rectangular Marquee tool and click on the background layer. Drag a selection over the very bottom of the building. **Right-click/Ctrl-click** within the selection with the Marquee tool, and choose Layer Via Copy. Now go to **Edit > Transform > Flip Vertical.** Use the Move tool to drag the Reflections layer down so that it sits on the paving in front of the building.

9. Set the Reflections layer blending mode to Soft Light. Choose the Eraser tool and erase any parts of this layer that sit on top of the furniture in the foreground. Flatten the image using **Layer > Flatten Image.**

NATURAL WORLD
Simulating lightning

Catching real lightning with a compact digital camera can be a difficult and somewhat dangerous activity. The choice is either to spend a great deal of time outside in a storm waiting for the perfect moment, or a great deal of money on special photographic equipment. Although we can't replicate the roar of thunder in Photoshop, we can easily add realistic lightning effects to photographic images. Of course, we could just draw a lightning bolt with a brush and apply a little glow to the layer, but that's unlikely to resemble the random qualities of real lightning. Instead, in this example, we'll use the Clouds filter and a simple gradient to convincingly imitate Mother Nature. The effect is positively electrifying.



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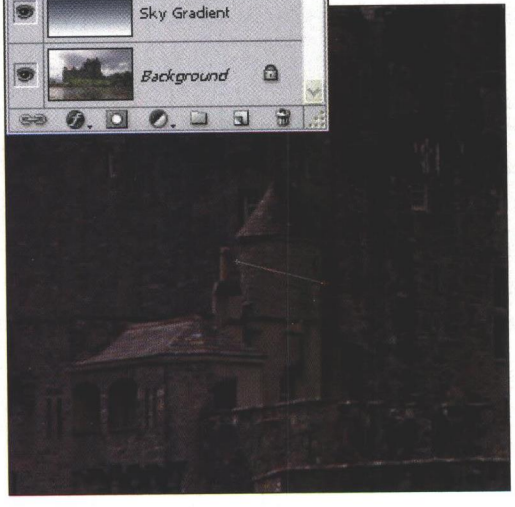

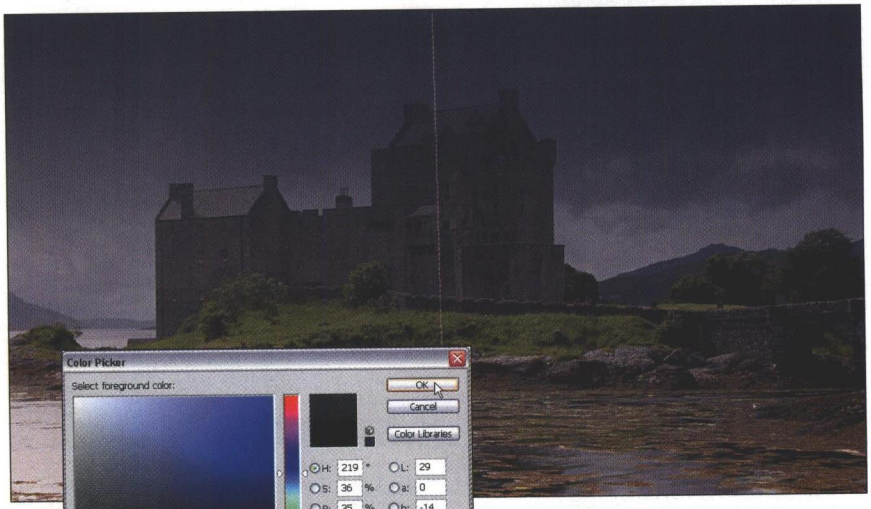

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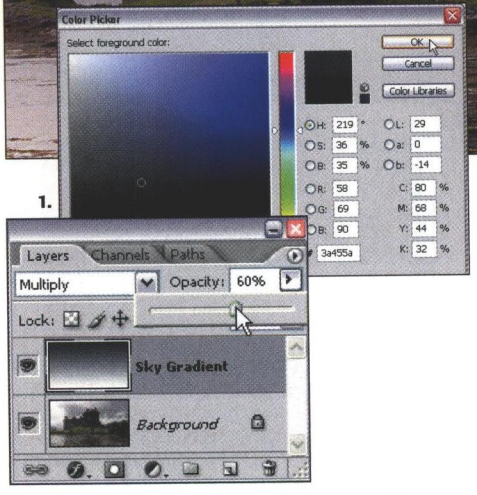
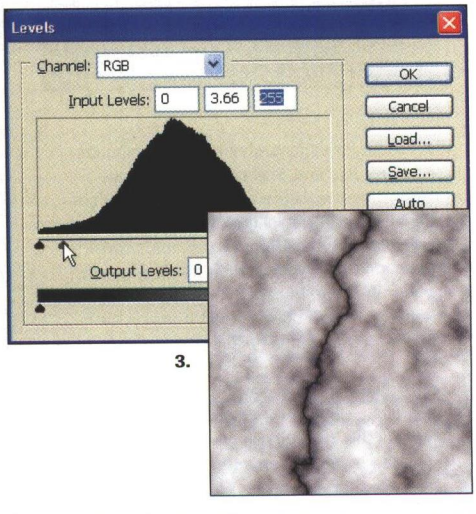


1. This image certainly has the potential to be stormy, but let's start by adding a little more drama before we create the lightning. Add a new layer **(Ctrl/Cmd+Shift+N)**, call it "Sky Gradient," and choose a dark blue/black for the foreground colour. Choose the Gradient tool from the Toolbar. Select Foreground to Background from the Gradient Picker, and Linear Gradient from the Options bar. Drag a Gradient from the top to the bottom of the image. Set the layer blend mode to Multiply and reduce opacity to 60 per cent.

2. Stay with the Gradient tool and add another new layer **(Ctrl/Cmd+Shift+N)**, calling it "Lightning." Choose Foreground to Background from the Gradient Picker and hit D on the keyboard to revert to default black/white swatches. Drag a short gradient diagonally across the central tower of the castle.



3.

3. Now go to **Filter > Render > Difference Clouds.** A dark jagged band will appear across the diagonal center of the layer. Go to **Image > Adjustments > Levels** and drag the middle slider below the histogram to the left until the lightning bolt is distinct amid the cloud fill.

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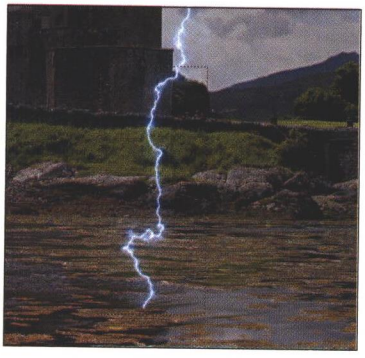


7.

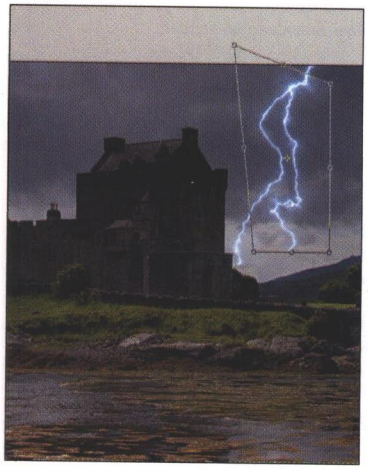
4. We want the lightning bolt to be white, with the surrounding area black, so go to **Image > Adjustments > Invert (Ctrl/Cmd+I).**

5. Again, choose **Image > Adjustments > Levels.** Grab the central grey point marker and drag it to the right until most of the clouds surrounding the lightning bolt have disappeared. Stop dragging the slider when just a few cloudy wisps remain attached to the bolt itself.

6. Now set the blending mode for the Lightning layer to Screen to hide all of the black on the layer, leaving just the lightning visible. To color the lightning, go to **Image > Adjustments > Hue and Saturation.** Check the Colorize box and drag the Hue slider to the right until the lightning bolt is an electric blue colour. Increase the Saturation value according to taste.

7. Choose the Rectangular Marquee tool and drag a selection around the unwanted lower half of the lightning bolt. **Right-click/Ctrl+click** within the selection, and choose Layer Via Cut. This will paste this section onto a new layer.

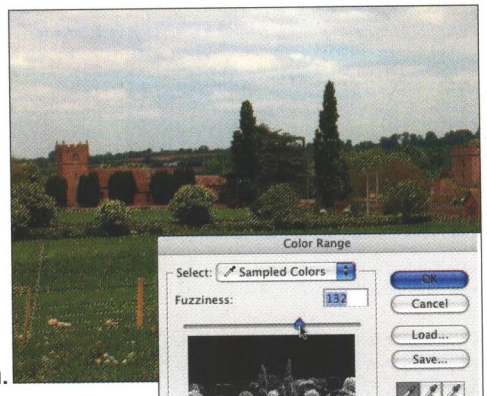
8. Go to **Edit > Transform > Distort** to move the second branch of lightning into position at the top of the first bolt. Click and drag within the bounding box to move it. Click and drag the corner handles to distort the layer a little, altering the shape of the bolt.



8.

NATURAL WORLD
Creating Snow

Sometimes a winter image is required and the only image available is a summer scene. Green grass, green leaves, and warm summer daylight all have to be transformed to change the season. Here, we'll take a distinctly summery photo and dress it in a blanket of snow, adding a blizzard for good measure. For a relatively simple technique that uses a few common Photoshop techniques in combination, the end result is surprisingly convincing. Let it snow!



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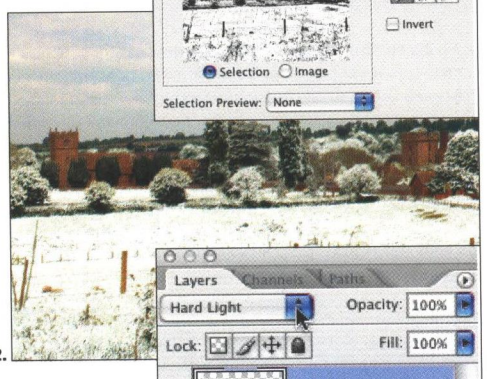

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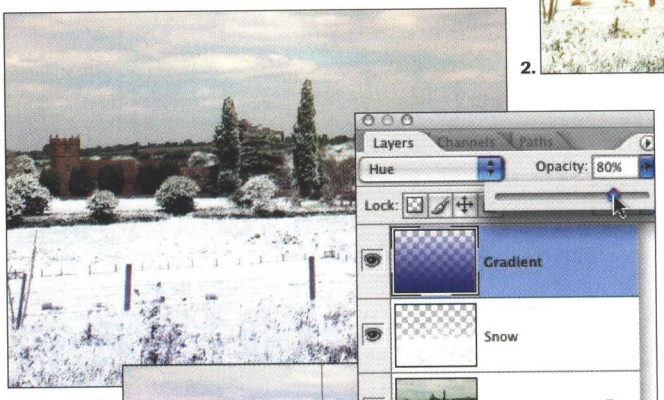

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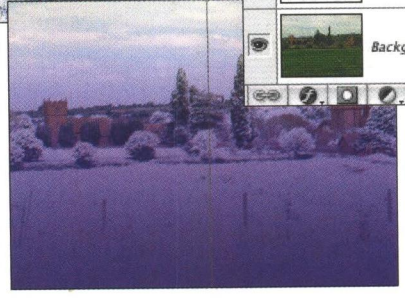

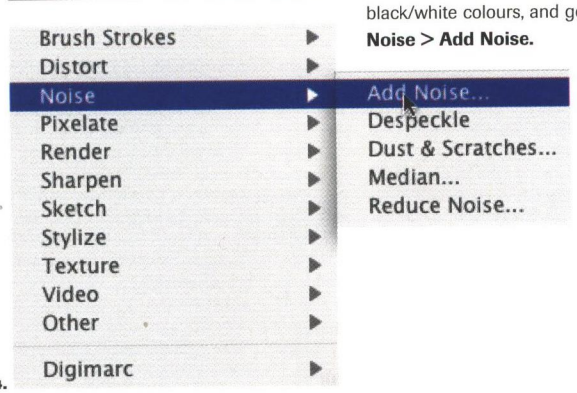

4.

1. First, we need to generate a layer of snow to cover the ground and trees in this summertime image. Choose the Eyedropper tool from the Toolbar and click in the field to sample a mid-green colour. We now need to make a selection based on the distribution of this colour throughout the image. Go to **Select > Color Range**. Use a Fuzziness slider setting of 132 and choose Sampled Color from the Select box. Click OK.

2. Add a new layer **(Ctrl/Cmd+Shift+N)**, naming it "Snow." We need to fill this active selection with white to begin the snow effect, so go to **Edit > Fill,** and choose White for Contents. **Hit Ctrl/Cmd+D** to deselect. In the Layers palette, change the blending mode of the Snow layer to Hard Light.

3. The image needs to be made a little colder now. Add another layer, call it "Gradient", and click in the foreground colour swatch, choosing a vibrant blue/violet. Select the Gradient tool from the Toolbar and click in the Gradient Picker, choosing Foreground To Transparent. Click and hold with the tool at the bottom of the image and drag the gradient guide vertically to the top. Set the blending mode for this layer to Hue and the layer opacity to 80 per cent.

4. Now to add some snow. Add another new layer **(Ctrl/Cmd+Shift+N)** naming it "Snowfall." Fill this layer with 50 per cent grey using **Edit > Fill > Contents: 50% Grey**. To begin creating the snowfall, we need to add some random noise to this layer. Hit D on the keyboard to revert to default black/white colours, and go to **Filter > Noise > Add Noise.**

READER OFFER

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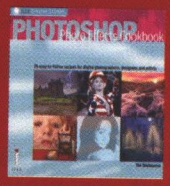

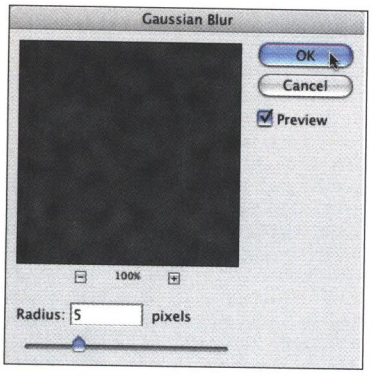

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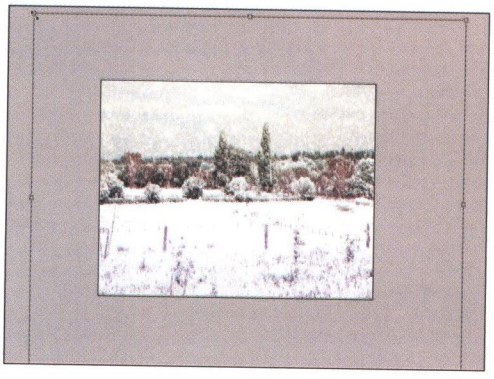

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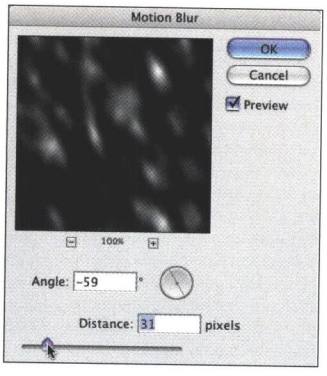

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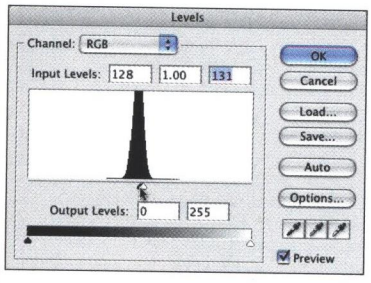

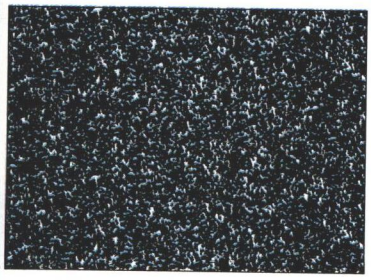

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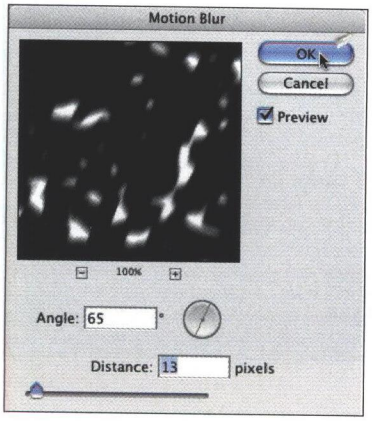


7.

5. In the Add Noise dialog box, drag the Amount slider up to 50%. Choose Gaussian for Distribution and check the Monochromatic check box. Click OK. This noise is too fine for a snow effect, so blur this layer using **Filter > Blur > Gaussian Blur.** Use a Blur Radius of five pixels to clump the noise a little.

6. We need to adjust the contrast of this layer. Do this using **Image > Adjustments > Levels**. In the Levels dialog box, grab the White Point marker and drag it to the left until it's below the center of the histogram peak. Now drag the Black Point marker to the right until it almost disappears behind the white marker. Click OK.

7. Set the blending mode of the Snowfall layer to Screen and reduce the opacity to about 50 per cent to allow the landscape to show through the snow. To blur the snow a little, and to give the impression of it being blown by the wind, go to **Filter > Blur > Motion Blur.** Use an Angle of 65 degrees and a Distance of 13 pixels.

8. Adding a few larger snowflakes will give the impression of distance. Duplicate the Snowfall layer **(Ctrl/Cmd+J)** and go to **Edit > Transform > Flip Horizontal.** Zoom out from the image using the Zoom tool and go to **Image > Transform > Scale**. Lock the chain-link in the Options bar to constrain the proportions and drag the corner handle on the bounding box outward. Hit the Enter key to commit the Transformation.

9. Finally, on this duplicate Snowfall layer, go to **Filter > Blur > Motion Blur.** We want to blow this snow in the other direction, so use an Angle of -59 and a Distance of 31. If the landscape is not showing sufficiently, reduce the opacity of the two Snowfall layers a little more.

THE WORLD SERIES

Creating 3D landscapes is a complex task, and the various applications that take it on present a wide variety of approaches. Digit assesses the lay of the land.

BY SIMON DANAHER

Mountain and Lake *by Giacomo Costa, 2005*
www.giacomocosta.com
This image was created in Vue 5 Infinite.

Landscape rendering continues to be a well-served niche in 3D graphics, with a number of dedicated applications on the market. It makes sense to use a dedicated program for 3D landscape generation, because if you find yourself given the job of rendering out an image or animation of a land or seascape you may discover that your usual 3D package is simply not up to the job. Getting the desired result on a more general 3D application – populating a scene with trees, shrubs, rocks and other natural features – would involve a degree of hoop-jumping usually reserved for the circus.

Getting decent results in applications such as Maya, 3DS Max, Cinema 4D, or LightWave is not impossible, but a dedicated program's whole workflow and toolset is designed around the task of producing a 3D landscape.

Ease of use and speed of production are the two key benefits of using a dedicated program, and this is very important when deadlines are tight or clients request amendments. However, the main limitations of a dedicated system are the quality of the output, and lack of integration with your current 3D system or pipeline. If all you need to produce are renders of natural environments without other objects ▷

Artmatic Voyager

format Mac OS 9 X
price $129 (around £70)
minimum specs 400MHz Power PC G4 processor, 128MB RAM
company U&I Software, *www.uisoftware.com*
contact Buy online
digit rating ✪✪✪◐○

The simplest application on test in terms of usability, Artmatic Voyager offers an experience more like exploration than construction or modelling. Whereas the likes of Bryce has become more complex over the years as it attempts to become a proper 3D program, Artmatic Voyager takes the original concept of Bryce and distills it into something even simpler and more refined.

Voyager's interface is simple, clean, but very small. On a 1,280-x-1,024 monitor the main controls, view panel and menus take up about a quarter of the screen area – the rest is filled with a grey border making it look ever smaller. The main view is continuously rendering whatever you are looking at in the virtual world. There are no plants or trees or other complications in Voyager. Any vegetation needed is simulated with textures, so a greenish tint and fractal pattern for a wooded hillside is about as good as it gets.

The controls for sun direction and colour ambient levels are located on the left of the interface, and are much like those in Bryce. To the top right is a plan view allowing you to jump quickly to a point on the surface that you like the look of.

The world can be selected from a menu giving you different kinds of terrain to choose from and this can be edited slightly to change the overall amplitude, but it's fairly basic stuff. There's a sky preset editor that can be changed from an algorithmic fractal style cloudy sky to a special Artmatic environment map.

The settings of the algorithmic sky can be changed to make it more or less cloudy, and it generally looks good. Voyager's final renders are surprisingly good-looking. There's a good level of detail – foamy breaking waves sea edges for example – and the water always looks good.

If you need images and animations of 3D landscapes in a hurry – and aren't too fussy – then Artmatic Voyager does an excellent job.

Bryce 5.5

format Mac OS X 10.2/3/4, Windows NT4/2000/XP
price €89.95 (around £60) download, €99.95 (around £68) boxed
minimum specs 1GHz Power PC G4/Pentium III processor, 512MB RAM, 100MB hard disk space
company Daz Software, *www.daz3d.com*
contact Eovia, *0033 556 134 006*
digit rating ✪✪✪○○

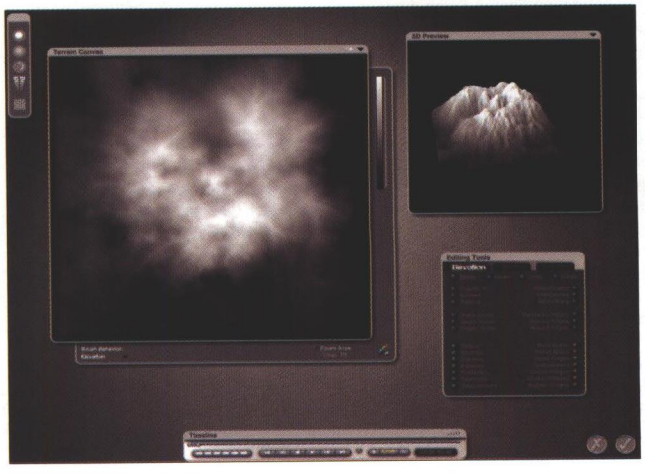
Named after the famous US national park, Bryce has long been the 3D application of choice for hobbyists and pros alike due to its easy-to-use interface and simple architecture. The program is a step up from Artmatic Voyager in terms of complexity though, and it's more like a traditional 3D program, in that you start with a totally blank scene and go about building what you want from scratch.

Almost everything is procedural and ready made in Bryce, so you can get a scene up and render it in minutes. If you need to be able to create custom-shaped landscapes then Bryce is your first port of call. The Terrain editor uses the concept of height maps to generate a polygonal surface from a greyscale image map. You can paint your own maps in any bitmap-editing program and import them into the Terrain editor, but it's usually more convenient to edit using the supplied tools.

Bryce has the ability to open Digital Elevation Models (DEMs). A DEM is a file containing the height information of real locations that have been scanned in geological surveys. If you want to render a specific location, the USGS (US Geological Survey) site offers free access to DEM files both of US and international locations. Bryce can open DEMs of 4,046 pixels square. Larger ones will be broken into separate terrains and tiled together, though you'll need a lot of RAM and some patience to do this.

The material system in Bryce is often criticized as being too complex and unfriendly. Nevertheless, it can be pressed into service to create some good results.

Volumetric lights and clouds can be rendered in this version. This gives artists a way to create environments with more depth and richness though at the price of render times. Bryce is a good landscape application, but its focus is too high-end for what it offers. Artmatic Voyager is more successful as a landscape generator.



GETTING A GENERAL 3D PROGRAM TO CREATE A LANDSCAPE INVOLVES A DEGREE OF HOOP JUMPING

or animation, then these systems represent complete solutions to the problem.

However, if you need to integrate other models into the scene and animate them, then you need to make sure that you can either get the landscape into your 3D application (often very difficult) or get models into the landscape application and be able to animate them sufficiently well. Don't expect the kind of animation sophistication found in a general-purpose 3D animation application.

World-beaters

The landscape rendering applications on test here cover a broad spectrum of complexity, functionality, and flexibility. On one hand, there's a program like Artmatic Voyager, which is as close as you're likely to get to a push-button solution for generating detailed 3D landscapes. World Construction Set is at the other end of the scale, offering technical and artistic designers a huge and complex set of tools for controlling just about every nuance of an environment. Which approach is best is up to you and the job at hand, but each offers something useful for artists and designers.

Generally, landscape-rendering applications have their tools divided into two main sections – those dealing with the physical

MojoWorld Pro 3.1

format Mac OS 9/X, Windows 98/2000/XP
price €199 (around £135), Pro €479 (around £320)
minimum specs Power PC G4/Pentium III processor, 256MB RAM, 350MB hard disk space, 32MB graphics card
company Pandromeda, *www.pandromeda.com*
contact Eovia, *0033 556 134 006*
digit rating ✪✪✪✪

MojoWorld is another landscape rendering application that tries to make the process easy and fun. It has more in common with Artmatic Voyager than it does with Bryce, but it's similar to Bryce in terms of workflow and features. You can opt to create either an entire world including land, sea and atmosphere, or explore a preset until you find a location you like.

However, MojoWorld terrains are procedural and extend infinitely, unlike Bryce's, which use a discrete greyscale bitmap to generate chunks of terrain. MojoWorld's terrain editing is more complicated because it uses procedural textures and graphs that can be blended together, but it's also more powerful as a result. However, the interface benefits from having many layers of complexity from simple wizards that guide you through the process, to graphs and sliders that control the minutiae of terrain or cloud fractals. It's usable if you want to plug-&-play, but MojoWorld also allows you the freedom to create something very specific if necessary.

The Pro version comes with a number of add-on modules not found in the standard version, but these can be purchased and plugged-in. These include powerful tree editor MojoTree, and MojoMove for producing animations of your environments. MojoTree allows you to place clumps of trees to quickly populate the terrain.

One great feature is the Morph grid. These are land-hugging grids that influence the shape of the terrain underneath. By dragging the points of the grid upwards or downwards you can create localized raising or lowering of the terrain to create prominent mountain ranges or deep bowls that don't negate the existing terrain.

MojoWorld 3.1 takes all the best bits from Artmatic Voyager and Bryce and combines them. It's a great system that effortlessly balances functionality and professional features with simplicity and a well thought out interface.

Vue 5 Infinite

format Mac OS X 10.3/4, Windows 2000/XP
price £411 plus VAT
minimum specs 1.25GHz Power PC G4/1.5GHz Pentium III processor, 1GB RAM, 100MB hard disk space
company E-on Software, *www.e-onsoftware.com*
contact E-on Software, *0033 143 553 671*
digit rating ✪✪✪✪½ DIGIT BUY

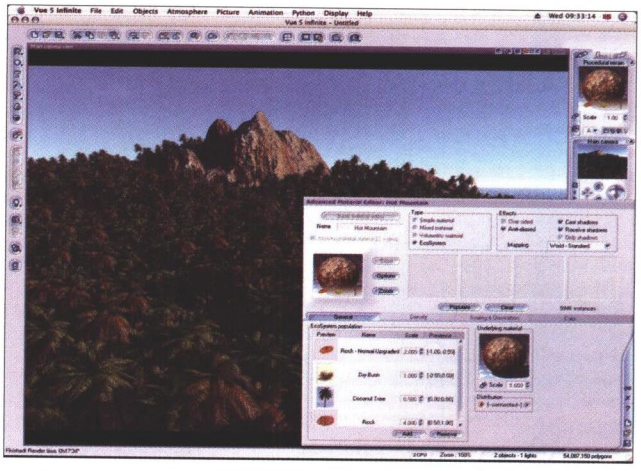
E-on Software's Vue has come on in leaps and bounds over the years. It started as something of a Bryce imitator, but rapidly improved to the point where it now sets the standard as a mid-range tool. The Infinite version is certainly good enough for most professional work.

Firstly there are new procedural terrains along with the more traditional greyscale map-based terrains. With procedural terrains you no longer have a problem with choppy resolution when the camera comes close. The terrains are always rendered at sub-pixel resolution and look great no matter how close you get, yet they can still be edited in exactly the same way as a traditional height-map terrain.

Landscapes are nothing if you can't add plants and trees, but traditional methods of producing such objects can rapidly spiral into an ordeal both for the user and their computer hardware. Ecosystems is a technology that allows terrains to be covered with plants, trees, and other vegetation, and takes a couple of seconds to perform.

Vue 5 Infinite can deal with millions of polygons so creating huge scenes and flying the camera through dense forests or a Martian landscape is easy. You can even mix and blend different ecosystems on the same terrain. The Ecosystem doesn't only deal with plants – you can populate a city with buildings, or create a platoon of infantrymen, which can all be animated as well.

The rendering quality is very good and since Vue supports the latest lighting and rendering techniques – such as HDRI and global illumination – you can create some very realistic images. The program is a lot more flexible than most landscape rendering applications, and is making the transition towards more general-purpose rendering work. The material system was always pretty good, if complex, and the latest addition brings it in line with systems such as Maya and Softimage|XSI.



landscape, and those that control the atmospheric effects. In addition to this, a program might offer population tools that can create and place large quantities of foliage into the scene, dispersing them over the terrain and offering control over how they are dispersed.

Scaling up

As well as plants, trees, grasses, and other kinds of flora, a program might also let you sprinkle a covering of rocks, boulders and other non-organic objects over your landscape.

In all of the programs there is one factor that needs to be addressed and that is the issue of scale. Landscape rendering programs need to work over vast ranges of scale and do so seamlessly if they are to produce convincing results. From entire planets to the tiniest grain of sand, the program needs to be able to tie together the micro and the macro without the overhead you might normally expect from a traditional 3D program.

At any given camera angle on the surface of a planet, for example, you can expect to see things that are both very close to the camera and very distant. Both need to be seen at sufficient levels of detail in order to look good but at totally different scales of resolution. If this were not so, the overhead of creating a landscape at the same level of detail throughout the image, so that near objects looked good, would be huge.

Cut scene

Pandromeda's MojoWorld handles this problem well. It continuously generates only the scenery currently in the camera view as you fly over it. Another good approach is to only display a low-resolution proxy in the interface but render ▶

WORLD CONSTRUCTION SET 6'S INTERFACE IS DIFFICULT, ESPECIALLY IF YOU HAVE AN ARTY APPROACH

WorldBuilder Pro 4

format Windows NT4/2000/XP
price $699 (around £390)
minimum specs 1.25GHz Power PC G4/1.5GHz Pentium III processor, 1GB RAM, 600MB hard disk space, 64MB graphics card
company Digital Element, *www.digi-element.com*
contact Digital Element, *001 510 601 7351*
digit rating ✪✪✪○○

Digital Element's WorldBuilder takes a more professional approach to landscape creation and rendering, and offers a novel approach to the creation of terrains. The program's learning curve is quite steep but like most advanced 3D programs the rewards are there if you persevere.

Landscapes are created by first adding a Landscape object, which is just the mesh for the terrain you'll create. This object has attributes for mesh density but the actual elevation is created using objects called Skeleton Lines. A Skeleton Line is best thought of as a map-style contour line, and represents an elevation level. However, unlike contour lines they don't need to form concentric rings – they can be drawn freely in any orientation and arrangement. The landscape is then draped over these lines creating the terrain surface.

The interface has been improved over previous versions but it's still quite difficult to learn. There's no Edit menu for example, and searching for Copy and Paste commands will prove fruitless. There's a duplicate button instead, but it doesn't have a menu counterpart so it's hard to find.

The resulting terrains are good, but it can take a lot of work to achieve the desired look. The sky and cloud rendering is very good, though, and the volumetric cloud objects produce excellent puffy clouds that render quickly. You can place plants and trees on terrains and use Areas to define patches of vegetation. While not quite as robust as Vue 5's Infinite system, you can create forests and grass fairly quickly.

WorldBuilder 4 is a decent enough program taken in isolation, and its 3DS Max and Maya plug-ins make it appealing for those who need to integrate landscapes into their main 3D application. However, it's not that easy to use and the OpenGL rendering is slow, so it feels clunky when setting up scenes. It's also pricey.

World Construction Set 6

format Windows NT4/2000/XP
price $500 (around £285)
minimum specs 1GHz Pentium III processor, 512MB RAM, 1GB hard disk space
company 3D Nature, *www.3dnature.com*
contact N-Light, *0117 904 9452*
digit rating ✪✪✪◐○

World Construction Set is a powerful and complex package aimed at the professional design and technology markets, and anyone else who needs accurate landscape modelling and visualization.

The interface is complicated and technically laid out. As a result it's difficult to learn, especially if you have an arty, experimental approach. If you're a calm, read-the-manual-first kind of artist then you'll probably fair better with this.

Due to its technical/geological leanings, WCS offers good support for DEMs, and generates terrains using procedural textures. There's also a painting tool called DEM painter, which you can use to modify real or self-created DEM images. It's non-destructive, so you can erase your edits back to the original DEM at any time.

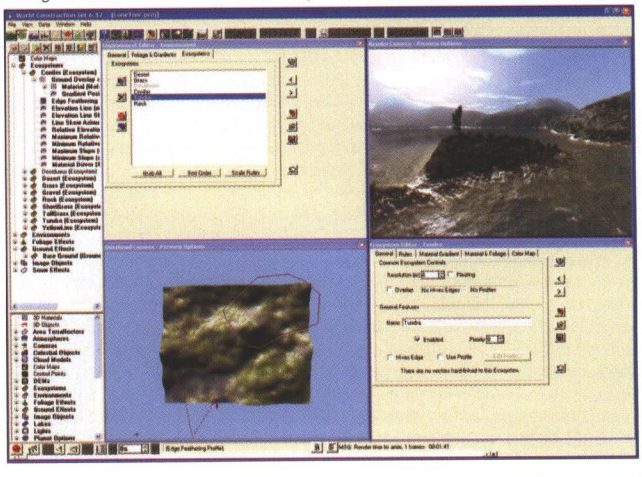
Foliage and landcover is well supported, making it easy to create dense forest or rock-strewn landscapes. It's not in the same league as Vue 5 Infinite, though.

If you're looking for a program that offers high levels of realism then WCS is probably not going to do the job.

It's a technical package aimed at a broader spectrum of uses than most of the packages on test. Development resources probably weren't squandered on catering solely for digital artists and designers. That said, the volumetric cloud rendering is excellent.

There is an optional module called Scene Express which allows you to export WSC scene data to other formats including LightWave scenes and 3DS Max. You can also export to VRML and STL for creating actual models of terrains with stereolithography technology.

World Construction Set is a complex package designed for those with a bit of knowledge about geological data. It's not really intended for casual use or for artists looking for ultra-realism. If that isn't a worry then it's a comprehensive system.



at a much higher level.

Instancing is another approach that allows computing resources to be efficiently used when populating scenes with large quantities of plants. Instancing does not duplicate an object, but rather creates an instance that refers back to the original dataset in memory, and places it somewhere else in the scene. This allows countless duplicates to be placed in the scene with only a little increase in memory requirements.

A still better approach is 'instance and generate' whereby each new plant or tree is spawned from a single algorithm and 'grown' as a new item in the scene. Many of the programs here use this approach because it allows for an unlimited supply of unique plants and trees (and other kinds of objects), avoiding the problem of uniformity when instancing mere geometry.

Freeware/Shareware options

If you want to try some 3D landscaping tools but have a tight budget to contend with, there are a couple of Mac and PC applications available either as shareware or freeware. One of the more famous and comprehensive of these is Terragen (*www.terragen.com*). This program is available for Windows and Mac (both OS 9 and OS X versions are available) and is capable of professional landscape and environment rendering.

Another free program is Visual Terrain Maker. This PC application is a very simple terrain generating application. It can be downloaded free from *www.ungsoft.com*.

3DEM (*www.visualizationsoftware.com/3dem.html*) is a free program for generating terrains from DEM files, which are also freely available on the Internet. Now at version 19.0 (it's been around for a bit) the site also has a useful link to finding DEMs of the USA.

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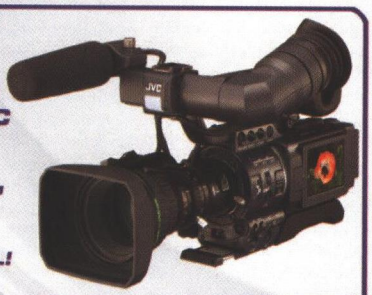

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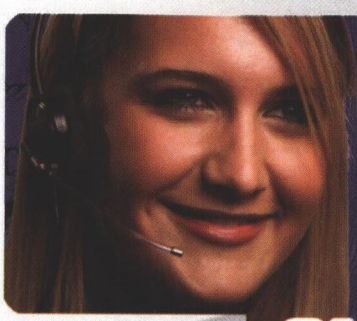

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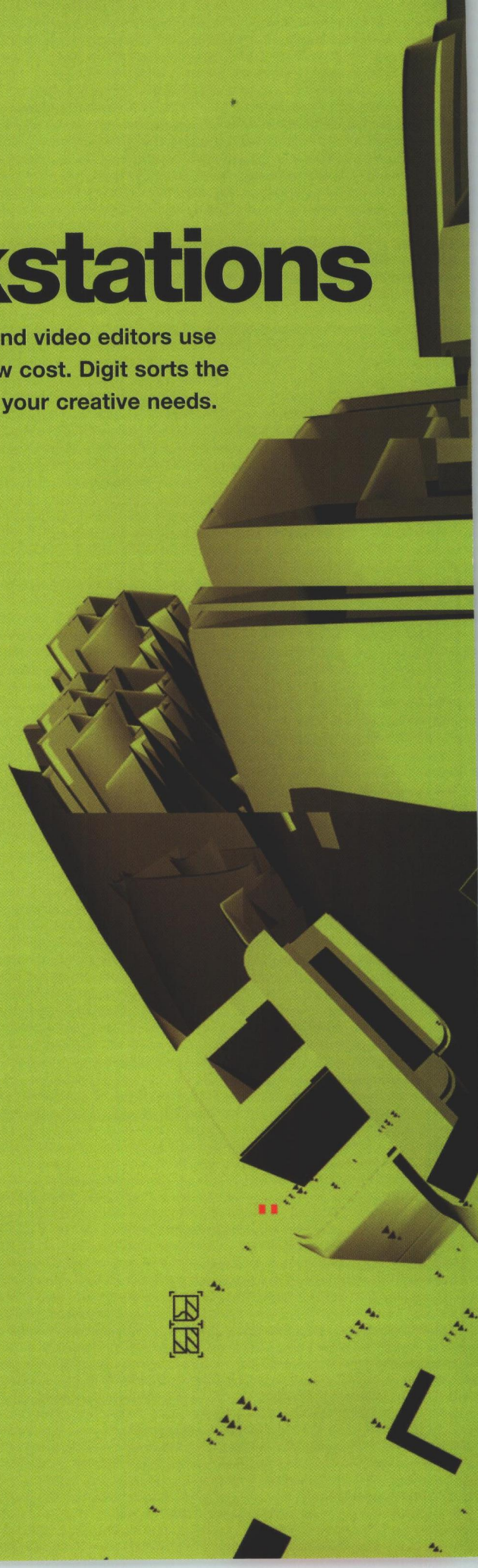
Graphics workstations

The latest power desktops for graphic designers, illustrators and video editors use dual-core technology to offer top-level power at a relatively low cost. Digit sorts the choice of chips, cards, and cases to find the best machine for your creative needs.

BY NEIL BENNETT

main. **Xworks X8i-SLIDC**
1. **Apple Power Mac G5 dual 2.7GHz**
2. **Armari Gravistar ST**
3. **Cybernex CX-XiE-2S**
4. **Dell Precision 380**
5. **Evesham DC64**
6. **Fujitsu-Siemens Celsius M**
7. **Scan 3XS DCC 939 Dual-Core**



Many of the workstation innovations over the last 12 months have been aimed at 3D artists and animators, but we've also seen new technologies and announcements that are equally appealing to designers, illustrators, video editors and other 2D-based creatives with more modest demands and budgets.

Graphics workstations generally cost between £1,500 and £2,000 plus VAT. For this amount of money, you'll get a workstation that's powerful enough to provide efficient use of graphics tools such as Photoshop, Illustrator, and Painter, as well as DTP software such as QuarkXPress and InDesign. This type of workstation can also run video editors such as Premiere, Final Cut Pro and Avid Xpress Pro, and compositing suites such as After Effects and Combustion.

Apple has long ruled this arena, but the emergence of dual-core processors has reinvigorated the Windows side of the graphics workstation market. Previously, if you wanted access to the extra power provided to creative applications by multi-processor set-ups, you could pay more than £2,000 – or buy a Mac, as Apple offered dual-processor Power Mac G5s beginning at around £1,500.

Dual-core processors include two CPUs on the same chip, sharing the same cache (short term memory for quick recall). As with true multi-processor set-ups, tasks can be split and shared between the two cores so that applications run faster overall. It's not as effective as true multi-processor systems – such as those built using AMD's Opteron or Intel's Xeon chips – but, as the chips cost less and can plug into less expensive single-processor motherboards, dual-core computers cost much less.

Applications have to be specifically written to take advantage of multi-processor set-ups (dual-core or dual processor), but most major creative applications have had such support built into them for many years. Games and

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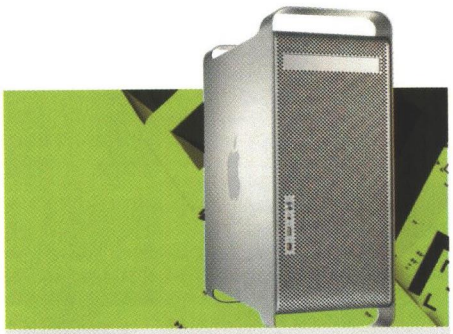


Apple Power Mac G5 dual 2.7GHz

processor 2x PowerPC G5 2.7GHz
price £1,845.96 plus VAT
company Apple, *www.apple.com/uk*
contact Apple, *0800 783 4846*
digit rating ★★★★☆

Apple may have given up on IBM's PowerPC chips in favour of Intel in future machines, but the G5 is no slouch. This model's two 2.7GHz chips make it the fastest at processing in this group test – though only mere seconds ahead of the Cybernex and Xworks systems.

Apple supplied us with a unit with 1.5GB of RAM. This isn't offered as a build-to-order option on the company's site, so we've calculated the price based on the standard 512MB (2x 256MB) of RAM and a 1GB (2x 512MB) memory upgrade. This Mac has 512MB of RAM less than all of the other units we've looked at here, but it still managed to deliver a respectable score in our Photoshop test. As always, the G5 is way behind the competition for real-time 3D, though this is a small issue for most designers and editors.

A year ago, the highest-spec G5 (featuring 2.5GHz processors) outperformed and outspecced the competition in its price range. In 2005, the emergence of dual-core processors has knocked the G5 from its pedestal, allowing PC makers to match the Mac's power and take advantage of the more roomy insides to add larger and better hard drive structures. Some have even matched its aesthetics.

One advantage the G5 has over all of the competition is the operating system. It suffers from a more limited range of software – though some major video tools such as Final Cut Pro are Mac-only – but it's easier for the non-techie than Windows XP, and doesn't currently suffer from the same virus and spyware problems.

Armari Gravistar ST

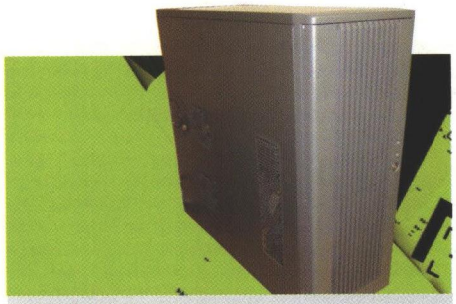
processor Athlon 64 X2 4800+
price £1,895 plus VAT
company Armari, *www.armari.co.uk*
contact Armari, *01923 225 550*
digit rating ★★★★½ DIGIT BUY

The Gravistar ST is the first PC we've seen in a long time to match Apple's aesthetics. The shiny black case with blue trim looks more like a piece of high-end entertainment kit than a PC – and definitely better than the G5's air-conditioning unit approach – and it's complemented by a similarly black-&-blue keyboard and mouse. The design extends to ergonomics and great performance – the Logitech mouse is sculpted to be as comfortable as possible (unless you're left-mouse-handed) and uses laser technology for precision.

The aesthetics and peripherals are not the only features here that help to raise the Gravistar ST above the competition. Armari's workstation delivers a huge amount of power to Photoshop that makes it 20 per cent faster than its nearest rival. Behind this are some speedy Corsair RAM and a swift hard drive system. The core processor, an AMD Athlon 64 X2 4800+, features two cores and is more than a match for Intel's Pentium D 840 – but it isn't a match for true dual-processor systems.

The hard drive set-up includes two 74GB, 10,000rpm drives that have been joined (striped) together and then split into 40GB and 90GB partitions – plus a large, slower 300GB/7,200rpm media drive. This provides the best mix of fast performance and space without breaking the bank. It's not as expansive or secure as the 3XS's set-up, but the performance boost is worth it.

The included ATI FireGL v5100 graphics card isn't the most powerful we've seen, but it's fast, as its top-rated Cinebench score testifies. This makes it ideal for 3D transforms and effects in video applications.



Cybernex CX-XiE-2S

processor 2x Xeon 3.2GHz
price £1,849 plus VAT
company Cybernex, *www.cybernex.co.uk*
contact Cybernex, *0870 460 5829*
digit rating ★★½☆☆

The trippingly-named CX-XiE-2S is huge, ugly, and noisy, and would probably be more comfortable in a server room somewhere, away from actual people.

The reason for its size and noise is that it has an old-school choice of two Xeon processors at its heart, which take up a lot of space and need a lot of cooling. However, we've seen much quieter dual-processors workstations with better looking cases before, including the Power Mac G5 in this group test.

Even so, the two actual processors do outperform the two cores of the newer models. It's only beaten – and then only just – by the Mac, which also features two real chips. Its Photoshop score is good but not great. It also performs adequately at real-time 3D work, as the NVidia Quadro 1400 graphics board – like the ATI FireGL v5100 – delivers enough power for editing and compositing.

As you'd expect from the enormous case, there's a lot of well laid-out room inside. The standard two 160GB Serial ATA drives leave space for another four, and the motherboard supports up to 16GB of RAM. However, this level of expansion is beyond the needs of most designers, illustrators, and editors. We also weren't impressed by the positioning of the front USB ports at the base of the unit, as this giant definitely has to sit on the floor.

The choice of keyboard and mouse - Microsoft's Basic Keyboard and Basic Optical Mouse – perfectly epitomizes this workstation. It's a stripped-down 3D workstation that would need an extra £500-£1,000 spent on it to make it worthwhile.

less-demanding office applications generally haven't – hence the less-than-rapturous response to dual-core chips from the mainstream PC press.

We've seen a resurgence for Intel in the group test. Until it released the dual-core Pentium D processor recently, the company was lagging behind AMD. Many vendors have plumped for the Pentium D processor – rather than its dual-core Athlon 64 X2 equivalent. One vendor has included dual single-core Xeon chips. These have dropped in price recently as dual-core Xeon chips are still some way off.

Workstation RAM has changed little technologically, but platform and software changes have made it more accessible. Two years ago, 32-bit operating systems such as Mac OS X 10.2 and Windows XP limited the amount of RAM available to individual applications to 2GB. Tweaks to Windows could increase this to 3GB, though this doesn't work on all computers, and only a few applications (such as Photoshop) can take advantage of the extra RAM.

The 64-bit question

Mac OS X 10.3 was the first 64-bit operating system to be made available to creatives, running on 64-bit PowerPC G5 chips. This allowed applications to access more RAM, while the G5 computer increased the maximum RAM to 8GB – though theoretically 64-bit systems can support up to 16 billion GB.

In April, Microsoft released Windows XP 64-bit Edition, which also supports increased RAM when combined with 64-bit versions of AMD Athlon and Opteron and Intel Pentium and Xeon processors. So far,

Dell Precision 380

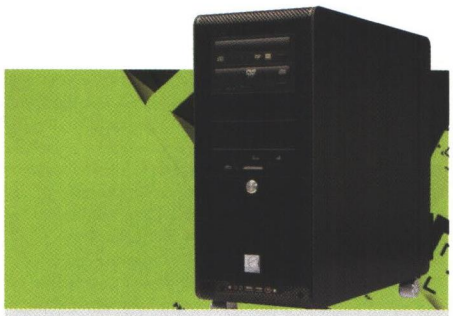
processor Pentium D 840
price £1,529 plus VAT
company Dell, *www.dell.co.uk*
contact Dell, *0870 152 4699*
digit rating ✪✪✪✪½

Dell has redesigned the case of the Precision 380 and we can't for the life of us work out why. It was never great looking – though Dell workstations always looked powerful – but the Precision 380 looks like a version of its XPS high-end gaming system made by someone with GCSE grade-F metalwork skills. More importantly, Dell's also got rid of the innovative clamshell design that made poking around inside so much easier than with a conventional side panel.

The Precision 380 sees the first appearance of the Pentium D 840 3.2GHz dual core processor. This is Intel's fastest model but it can't keep up with AMD's highest-specced dual-core Athlon 64 X2 chip – taking around 30 seconds longer than AMD-based workstations from Armari and Scan in our graphics processing tests.

Dell's workstation performed poorly in our Photoshop tests, as have all of the Pentium D units in this test when compared to those with Athlon 64 X2 chips. Dell has also scrimped on the RAM, filling all of the Precision 380's four RAM banks with 512MB modules (most units here use two 1GB DIMMs).

The hard drive system is the standard two 160GB Serial ATA drives, but Dell has rather over-egged the machine with the inclusion of the high-end Quadro 3400 graphics card. This is a worthy card for high-end 3D work but our budget would have been better spent on larger RAM modules, faster or more hard drives, or even the excellent keyboard that comes with 380's big brother, the Precision 670. The basic included keyboard is excellent for text work though.



Evesham DC64

processor Opteron 265
price £1,999 plus VAT
company Evesham, *www.evesham.com*
contact Evesham, 0870 160 9700
digit rating ✪✪✪✪½

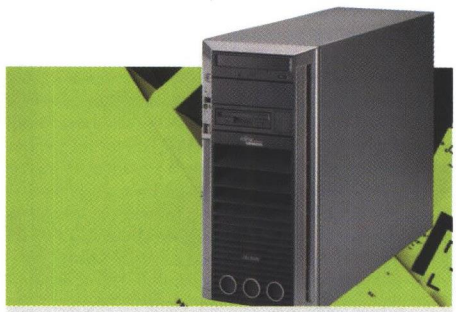
The DC64 is the only Opteron-based unit in this group test. Dual-core Opteron chips are more powerful than single core Xeon rivals, but they're more expensive – so this workstation only has one of them, and it's the 1.8GHz slowest version at that. With the other workstations featuring chips from 2.4-3.2GHz, it's no surprise that the DC64 was a rather lame straggler in our graphics-processing test.

The ability to upgrade the machine in the future with another processor is intriguing, but only creatives working in 3D are likely to want to do this. The same is true for the maximum 24GB of RAM. The choice of graphics card, ATI's Fire GL v5100, is ideal for those without strenuous 3D work to do.

The DC64's Cinebench real-time 3D score isn't as high as the other workstation in this group test that has the v5100 – Armari's Gravistar ST – which can be blamed on the slower processor. This workstation's Photoshop test score wasn't as slow as we'd expect, though that application does seem to favour AMD processors.

Unlike our other cut-down 3D workstation, Cybernex's CX-XiE-2S leviathan, the DC64 is relatively small, very quiet, and vaguely stylish. It also sits on shiny silver wheels (with a latch to keep it stationary).

The rest of the DC64's specifications are unremarkable, possessing the standard two 160GB Serial ATA hard drives and the good-but-not-exceptional combination of Microsoft wireless keyboard and mouse, which lacks top-notch features such as a mouse-battery charger.



Fujitsu-Siemens Celsius M

processor Pentium D 840
price £1,980 plus VAT
company Fujitsu-Siemens, *www.fujitsu-siemens.co.uk*
contact Fujitsu-Siemens, *0800 004 003*
digit rating ✪✪✪½☆

Windows XP Professional 64-bit, when used with a 64-bit processor and the right software, is supposed to improve performance in creative applications. However, creating 64-bit versions of the main tools doesn't seem to be a priority for the likes of Adobe and Quark. Our tests on the Celsius M – the only workstation here supplied to us with the 64-bit version of Microsoft's OS – show that current, 32-bit versions of applications runs perfectly fine on XP 64 and will only improve if you have more than 3GB of RAM.

The inclusion of XP 64 as the operating system is the only differentiating factor for Fujitsu-Siemens. Otherwise it's a textbook example of a bare minimum graphics workstation – so it's rather surprising that the Celsius M is the second most expensive unit here. This is a base that almost all of the other workstations in this group test have improved upon, as they all have larger or faster hard drive systems than this unit's single 160GB Serial ATA drive.

The competition all have better keyboards and mice than the Celsius M's basic beige, sluggish units that you'd expect to find on an entry-level PC, not a workstation costing almost two grand. They also all have 16x speed DVD burners with dual-layer support and some have 7-in-1 media card readers, while Fujitsu-Siemens' unit has a DVD/CD-RW combo drive and an almost redundant floppy drive.

The Celsius M's case isn't great looking, but at least it's quiet and the front-facing ports are easy to get to – though there's no front-facing FireWire port.

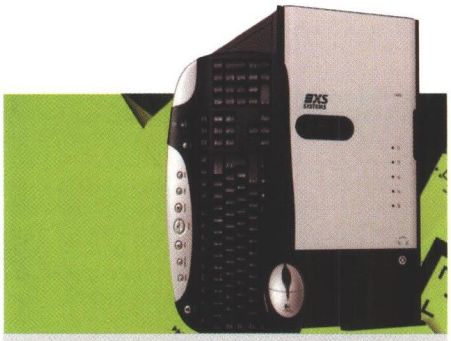
we've seen workstations that support up to 32GB of RAM, which should be enough for anyone who isn't modelling nuclear explosions.

Only some applications support more than 2GB of RAM, and some still require updating by the developer before they'll work under Windows XP 64 (especially video tools). Photoshop CS 2 added support for working with 3GB of memory. If you have 4GB or more, it cleverly allows 700MB to be used separately by plug-ins (including some filters and actions). Even more cleverly, any left is used as a faster version of its scratch disk.

The power of 3D graphics cards has reached a level that unless you're performing a lot of 3D compositing, a modestly priced graphics card will provide more than you require. All of the computers in this group test except Apple's Power Mac G5 include workstation-class graphics cards. As well as being certified for high-end applications such as Avid's editing tools, they are also generally more reliable than gamer boards.

On-board audio used to be pretty poor, but modern motherboards have improved the sound quality dramatically and added support for technologies such as surround sound. They're not as good as an add-in board such as those from Creative, but the sound quality is good enough for most users and none of the workstations here use add-in sound cards. Video editors and multimedia authors may want higher quality though.

Creative has fought back recently with its X-Fi line of cards, which offer audio-specific RAM. This frees up the host processor and RAM to concentrate on traditional processing, for example delivering more real-time performance to your video-editing application.



Scan 3XS DCC 939 Dual-Core

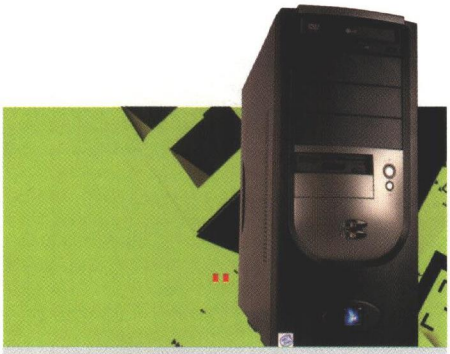
processor Athlon 64 X2 4800+
price £1,910 plus VAT
company Scan, *www.scan.co.uk*
contact Scan, *0870 755 4747*
digit rating ★★★★☆

The third entry here to use a black with contrast trim colour scheme – showing that the 80s are definitely back in fashion, at least among PC makers – the 3XS DCC 939 Dual-Core is larger than most other graphics workstations, though not as huge as Cybernex's CX-XiE-2S. The extra space has been put to good use though.

This 3XS workstation uses the same Athlon 64 X2 4800+ dual-core processor as our top-rated Armari Gravistar ST – and has the same amount of RAM – but it doesn't deliver the same power to creative applications. Its results in our graphics processing test were slightly faster than the Gravistar, but it was more than 50 per cent slower in our Photoshop tests.

This is most likely to be down to the workstation's drive arrangement. The 3XS's 160GB main drive spins at 7,200rpm, whereas the Gravistar has two joined (striped) 74GB/10,000rpm drives for its main drive (so Photoshop runs faster with the second partition of the main drive as the first scratch disk).

However, where the Gravistar has a 300GB media drive, the 3XS has 400GB of RAID 0+1 storage to save your work from a hardware failure. This is built from four 200GB drives, split into two groups of two. The drives in each group are joined together to create a 400GB space, and then one group is replicated (mirrored) onto the other – so that if one drive fails, you still have a backup of your work. This is a good set-up if you want more security for what you're working on than daily backups – or the usual designer's choice, no backup at all.



Xworks X8i-SLIDC

processor Pentium D 840
price £1,895 plus VAT
company Xworks, *www.xworksinteractive.com*
contact Xworks, *01785 229 191*
digit rating ★★★½☆

The X8i-SLIDC uses Intel's fastest Pentium D dual-core processor but doesn't come off quite as badly as Dell's Precision 380 and Fujitsu-Siemens' Celsius M against workstations featuring AMD's Athlon 64 X2. In our graphics processing tests in LightWave, Xworks' workstation matched its two competitors that use X2 chips, even just beating the top-rated Armari Gravistar ST. The unit performed pretty well in our Photoshop tests, scraping into the top half of our score chart.

These results are helped by the two 74GB, 10,000rpm hard drives. These deliver information to the rest of the computer much faster than conventional 7,200rpm drives. They're ideal especially for video editors, where data throughput can be instrumental in the level of real-time performance you get, but any creative who has to work with large files will see a boost from them.

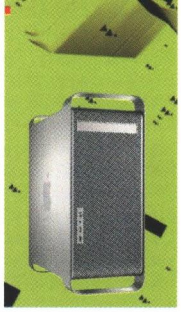
One problem with the drives included in the X8i-SLIDC is that they rattle. It's not too loud, but as the rest of the machine is whisper quiet, it's noticeable. The other is that the equally-priced Gravistar ST also has two 74GB, 10,000rpm drives – plus a 300GB media drive. Seeing how big creative files are getting these days, 148GB of storage is going to get used up pretty quickly.

Instead, Xworks has installed a top-notch ATI FireGL v7100 graphics card, which is overkill for a unit mainly aimed at 2D work.

The X8i-SLIDC's chassis is roomy inside without being huge, and everything is easy to get to on the Intel motherboard. It's no looker, but it's not particularly ugly either.

Little attention is often given to the keyboard and mouse when purchasing a new computer, which is odd when you consider that it's through these devices that you control your creative work with – and that poor ergonomics can lead to conditions such as RSI in the future. It's also worth checking out Logitech's line of laser mice, which offer much higher sensitivity and accuracy than standard optical mice.

As always, we invited workstation vendors to provide us with units based on a price range (£1,500-£2,000 exclusive of VAT) and a list of user applications (graphic design, Photoshop, illustration and video editing). All choices of specification were left to them, as we are judging both the machine and the company's ability to create a workstation appropriate to the task for non-techie customers.



products at a glance

MANUFACTURER	**APPLE**
MODEL	**POWER MAC G5**
PRICE (EXC VAT)	**£1,871.28**
DIGIT RATING	★★★★☆
PROCESSOR (SUPPLIED)	Power PC G5 2.7GHz
PROCESSOR (MAXIMUM)	Power PC G5 2.7GHz
RAM (SUPPLIED)	1.5GB
RAM (MAXIMUM)	8GB
DIMMS/FREE SLOTS	4/4
GRAPHICS CARD	ATI Radeon 9650
GRAPHICS RAM /AGP PORT	256MB/AGP 8x
HARD DRIVE TYPE	Serial ATA
HARD DRIVE SIZE /SPEED (RPM) (SUPPLIED)	250GB/7,200rpm
BAYS	5.25-inch ext, 2x 3.5-inch int
FREE BAYS (ON SUPPLIED)	3.5-inch int
REMOVABLE MEDIA DRIVE*	DVD±RW (16x/dual layer)
SLOTS	PCI Express x16, 3x PCI-X
FREE SLOTS (ON SUPPLIED)	3x PCI-X
DIMENSIONS (H-X-W-X-D MM)	511-x-206-x-475mm
SOUNDCARD	Onboard
PORTS	3x USB 2.0, FireWire 800, 2x FireWire, gigabit ethernet, optical in/out, modem
OS	Mac OS X 10.4
KEYBOARD	Apple standard
MOUSE	Apple standard mouse

Testing times

Image manipulation
This test performs 20 actions upon a 200MB image – including filters and transformations – in Photoshop CS 2 with Version Cue running. Results are in seconds and smaller bars are better.

Graphics processing
This uses the radiosity_BOX.lws file, included with LightWave 8.3, to test the response to very complex scenes and long-term stability. Results are in

ARMARI	CYBERNEX	DELL	EVESHAM	FUJITSU-SIEMENS	SCAN	XWORKS
GRAVISTAR ST	CX-XIE-2S	PRECISION 380	ACUMEN DC64	CELSIUS M	3XS DCC 933 DUAL-CORE	X8I-SLIDC
£1,895	£1,849	£1,529	£1,999	£1,980	£1,910	£1,895
★★★★★ DIGIT BUY	★★★☆☆	★★★★☆	★★★☆☆	★★★☆☆	★★★★☆	★★★★☆
Athlon 64 X2 4800+ (2.4GHz dual core)	2x Xeon 3.2GHz	Pentium D 840 (3.2GHz dual core)	Opteron 265 (1.8GHz dual core)	Pentium D 840 (3.2GHz dual core)	Athlon 64 X2 4800+ (2.4GHz dual core)	Pentium D 840 (3.2GHz dual core)
Athlon 64 X2 4800 (2.4GHz dual core)	2x Xeon 3.6GHz	Pentium D 840 (3.2GHz dual core)	2x Opteron 275 (2.2GHz dual core)	Pentium D 840 (3.2GHz dual core)	Athlon 64 X2 4800 (2.4GHz dual core)	Pentium D 840 (3.2GHz dual core)
2GB	2GB	2GB	2GB	2GB	2GB	2GB
4GB	16GB	8GB	24GB	4GB	4GB	8GB
2/2	2/6	4/0	2/4	2/2	2/2	2/2
ATI FireGL v5100	NVidia Quadro FX 1400	NVidia Quadro FX 3400	ATI FireGL v5100	NVidia Quadro FX 1400	NVidia Quadro FX 1400	ATI FireGL v7100
128MB/PCI Express	128MB/PCI Express	256MB/PCI Express	128MB/PCI Express	128MB/PCI Express	128MB/PCI Express	256MB/PCI Express
Serial ATA	Serial ATA	Serial ATA	Serial ATA	Serial ATA	Serial ATA	Serial ATA
2x 74GB/10,000rpm (RAID 0, logically split) + 300GB/7,200rpm	2x 160GB/7,200rpm	2x 160GB/7,200rpm	2x 160GB/7,200rpm	160GB/7,200rpm	160GB/7,200rpm + 4x 200GB/7,200rpm (RAID 0+1)	2x 74GB/10,000rpm
3x 5.25-inch ext, 2x 3.5-inch ext, 4x 3.5-inch int	4x 5.25-inch ext, 2x 3.5-inch ext, 6x 3.5-inch int	2x 5.25-inch ext, 2x 3.5-inch ext, 4x 3.5-inch int	5x 5.25-inch ext, 6x 3.5-inch int	3x 5.25-inch ext, 4x 3.5-inch int	3x 5.25-inch ext, 8x 3.5-inch int	4x 5.25-inch ext, 3.5-inch ext, 2x 3.5-inch int
2x 5.25-inch ext, 3.5-inch ext, 3.5-inch int	3x 5.25-inch ext, 3.5-inch ext, 4x 3.5-inch int	5.25-inch ext, 3.5-inch ext, 2x 3.5-inch int	3.5-inch int	5.25-inch ext, 3x 3.5-inch int	4x 3.5-inch int	3x 5.25-inch ext, 2x 3.5-inch int
DVD±RW (16x/dual layer) + 7-in-1 multi-format	DVD±RW (16x/dual layer) + floppy	DVD±RW (16x/dual layer) + floppy	DVD±RW (16x/dual layer) + 7-in-1 multi-format	DVD/CD-RW (48x) + floppy	DVD±RW (16x/dual layer) + floppy	DVD±RW (16x/dual layer) + 7-in-1 multi-format
PCI Express x16, 2x PCI Express x1, 4x 32-bit PCI	PCI Express x16, 2x PCI Express x1, 4x 32-bit PCI x1, 3x 32-bit PCI	PCI Express x16, PCI Express x4, PCI Express	PCI Express x16, 2x PCI	PCI Express x16, PCI Express x1, 5x PCI	2x PCI Express x16, PCI Express x1, 3x PCI-X x1, 3x 32-bit PCI	PCI Express x16, PCI Express x4, PCI Express
2x PCI Express x1, 4x 32-bit PCI	PCI Express x16, PCI Express x4, 3x PCI-X, PCI	PCI Express x4, PCI Express x1, 2x PCI	2x 32-bit PCI	PCI Express x1, 5x 32-bit PCI	PCI Express x16, PCI Express x1, 3x PCI-X	PCI Express x4, PCI Express x1, 3x 32-bit PCI
425-x-206-x-463mm	444-x-211-x-588mm	425-x-206-x-463mm	473-x-205-x-522mm	385-x-205-x-504mm	425-x-220-x-620mm	457-x-200-x-460mm
Onboard 5.1	Onboard	Onboard	Onboard 7.1	Onboard	Onboard 7.1	Onboard 7.1
8x USB 2.0, 2x FireWire, gigabit ethernet, keyboard, mouse, parallel, serial, S/PDIF	6x USB 2.0, 4x FireWire, gigabit ethernet, keyboard, mouse, parallel, serial	4x USB 2.0, 3x FireWire, gigabit ethernet, keyboard, mouse, parallel, serial, S/PDIF	6x USB 2.0, 2x FireWire, gigabit ethernet, keyboard, mouse, parallel, serial, S/PDIF, optical out	6x USB 2.0, FireWire, gigabit ethernet, keyboard, mouse, parallel, serial, S/PDIF	6x USB 2.0, FireWire, gigabit ethernet, keyboard, mouse, parallel, serial, S/PDIF, optical out	8x USB 2.0, gigabit ethernet, keyboard, mouse, parallel, serial, S/PDIF
Windows XP Professional	Windows XP Professional	Windows XP Professional	Windows XP Professional	Windows XP Pro 64-bit	Windows XP Professional	Windows XP Professional
Logitech Cordless Desktop MX 3100	Microsoft Basic Keyboard	Dell standard wired keyboard	Microsoft Wireless Optical Desktop 1.0 keyboard	Fujitsu-Siemens standard wired keyboard	Logitech Cordless Keyboard	Microsoft Wireless Optical Desktop 4000 keyboard
Logitech MX 1000 Laser Cordless Mouse	Microsoft Basic Optical Mouse	Dell standard wired optical mouse	Microsoft Wireless Optical Desktop 1.0 mouse	Fujitsu-Siemens standard wired optical mouse	Logitech Cordless Rechargable Mouse	Microsoft Wireless Optical Desktop 4000 mouse

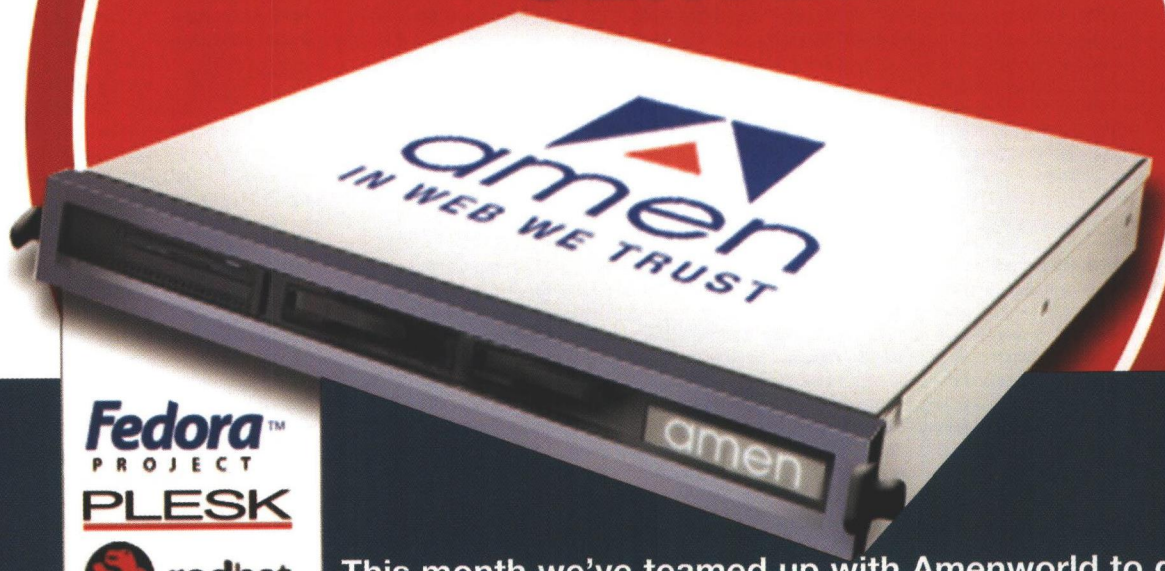
Test results

minutes and seconds, and shorter bars are better.

Real-time 3D performance Cinebench 2003 simulates scenes from within Maxon Cinema 4D. Scores given are the OpenGL HW-L result. This is an indication of the framerate and 3D power of the host machine, placing particular stress on the graphics card. Results are in Cinebench's proprietary units, and longer bars are better.

Workstation	Photoshop	LightWave	Cinebench
Apple Power Mac G5	2m 20s	19m 40s	1827 (5.05x)
Armari Gravistar ST	1m 57s	20m 49s	3856 (9.47x)
Cybernex CX-XiE-2S	2m 22s	19m 43s	3042 (8.39x)
Dell Precision 380	2m 55s	21m 18s	2338 (6.40x)
Evesham Acumen DC64	2m 30s	27m 51s	2996 (8.80x)
Fujitsu-Siemens Celsius M	2m 45s	21m 22s	3317 (9.63x)
Scan 3XS DCC 939 Dual-Core	3m 5s	20m 38s	3221 (8.10x)
Xworks X8i-SLIDC	2m 24s	20m 46s	3231 (8.86x)

WIN! AMEN DEDICATED SERVER



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Amenworld 2800 dedicated servers feature:
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A) 1.2MB
B) 1.2GB
C) 120GB

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THE SMALL PRINT

The competition is open to anyone over the age of 18. One entry per household only. No entries accepted from anyone connected with either company. Responsibility will not be accepted for any entries lost or delayed. No cash alternative. The winners will be the first correct entries selected after the closing date of December 1, 2005, and will be notified shortly afterwards. The winners' name will be published in the following issue of Digit. IDG cannot be held responsible in the event that a company that is providing a prize is unable to honour its obligation, for whatever reason.

buyers guide

hardware

workstations digital cameras dv camera
sinput devices storage monitors printers
scanners 3d graphics cards

software

3d dtp digital video graphic design multi
media web design utilities

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating

Workstations

Acumen DC64 £2,999 Evesham, www.evesham.com, 0870 160 9700 Windows Digit 88 **4.5**
Two dual-core processors for under £3,000 isn't the only impressive thing about this workstation. Could do with more RAM, but the power is blinding

D900T £1,300 AJP, www.ajp.co.uk, 020 8208 9744 Windows Apr 05 **3.5**
This huge laptop boasts a 17-inch widescreen LCD. The power comes from a 3.2GHz Pentium 4 chip, but overall it's not fully featured enough

EvoFlex 360-PCX59 £1,575 Graphicsworkstations.com, 020 8544 0022 Windows Oct 04 **4.0**
There are a few weaknesses – the unit is incredibly noisy, for one – but overall this is an excellent budget option for the graphics professional

Gravistar XR £2,899 Armari, www.armari.co.uk, 01923 225 550 Windows Digit 88 **4.5**
Driven by the fastest single-core Opteron chips, this workstation has a few niggles, but offers awesome power – making it perfect for 3D work

IntelliStation Z Pro £4,385 IBM, www.ibm.com/uk, 0800 015 7229 Windows Apr 05 **4.0**
Offers obscenely powerful 3D performance, and fast image rendering and processing. The price is huge, though, and the hard drive is too small

Katana 3D-9 £2,005 SavRow, www.savrow.com, 020 7428 0035 Windows Jun 05 **3.5**
Blistering performance, excellent set of components, and a great screen. However, it gets too hot, is massively heavy, and has a small hard drive

Latitude D610 £799 Dell, www.dell.com/uk, 0870 152 4699 Windows Apr 05 **2.5**
An excellent lesson on why creatives have high demands when it comes to PC specs. The screen is poor and the processor is basic. Best avoided

MJ-12m 7700 £1,928 Alienware, www.alienware.co.uk, 0800 279 9751 Windows Apr 05 **4.0**
The 3.4GHz Pentium 4 processor is at the heart of this enormous desktop replacement. The innovative drive system allows for speed and easy backup

NW8000 £2,507 HP, www.hp.com, 0870 241 1485 Windows Apr 05 **3.0**
This mobile workstation is a little on the large side, but boasts a great screen, and fast, powerful performance. It's a bit pricey for what you get

PowerBook G4 (15-inch) £1,870 Apple, www.apple.com/uk, 0800 783 4846 Mac Apr 05 **4.0**
The new PowerBook isn't a G5, but it's still notable. It's not the fastest, but it offers great value for money and is still very stylish

Power Mac G5 2.7GHz £1,701 Apple, www.apple.com/uk, 0800 783 4846 Mac Digit 88 **4.5**
Superb 2D graphics performance coupled with excellent value for money makes this the ultimate desktop Mac. The supplied RAM needs a boost

Precision 670 £5,691 Dell, www.dell.co.uk, 0870 152 4699 Windows Digit 88 **3.5**
The most powerful workstation we've seen but you need to spend £3,000 to upgrade the £1,200 model. Two 3.4GHz Xeon processors make it very fast

Precision M20 £1,397 Dell, www.dell.co.uk, 0870 152 4699 Windows May 05 **3.5**
The high-resolution screen for such a small laptop is great, and the M20 has a powerful processor. However, the graphics chip is under powered

Precision M70 £2,290 Dell, www.dell.co.uk, 0870 152 4699 Windows May 05 **4.5**
This mobile workstation has a great high-definition screen and a terrific graphics chip. It's pretty light given the power delivered. No FireWire ports

Roswell 5550 £2,257 Alienware, www.alienware.co.uk, 0800 279 9751 Windows Digit 88 **3.0**
Alienware usually makes PCs for gamers, and this foray into the 3D artist's world is unsuccessful. It's noisy, and has very limited upgrade options

RX3D Platinum £2,750 Real Machines, www.realmachines.co.uk, 0845 022 1000 Windows Digit 88 **4.0**
This 3D workstation offers 11 5.25-inch bays, allowing for mixing and matching of drives. Two Opteron 250 chips provide the power

Vaio A397XP £1,899 Sony, www.sony.co.uk, 08705 111 999 Windows Apr 05 **4.5**
The best balance for power and mobility for the creative designer – and it looks great too. Sony's X-black technology makes for an amazing screen

Vaio FS195XP £1,899 Sony, www.sony.co.uk, 08705 111 999 Windows Apr 05 **4.0**
Sony's answer to Apple's new 15-inch PowerBook. It's stylish, but its all-round performance is let down by some graphical corner-cutting

Digit Buyers guide

Digit's mission is to review and rate professional tools that bring out the creativity in you. Each month, Digit reviews more creative products than any other magazine in the UK, and Digit reviews are the most respected in the industry. The Digit Buyers Guide provides the most authoritative listing of reviewed products in the past year, including ratings, contact details, and a product summary. Pricing is correct at the time of the review, but please note that pricing does change – you should contact your distributor for pricing information before purchasing. The listing is updated every month.

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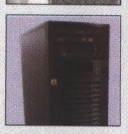
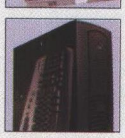
DIGIT BEST BUY RECOMMENDATIONS: WORKSTATIONS

Apple Power Mac G5 dual 2.7GHz
This is the ultimate desktop Mac. Perfect for the 2D creative, the Power Mac G5 dual 2.7GHz also offers good value for money

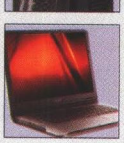


Armari Gravistar XR
A hugely powerful 3D workstation, Armari's Gravistar XR offers incredible performance and is easily expanded and upgraded

Dell Precision M70
This genuinely mobile workstation has a 15-inch screen with high-definition resolution – plus it has the graphical power to drive it



Evesham Acumen DC64
Dual-processor 3D workstation offering blinding performance, plenty of scope to upgrade, and great peripherals



Sony Vaio A397XP
This unit is a winner, combining creative power with genuine mobility. Stylish, with Sony's great X-black screen technology

DIGIT BEST BUY RECOMMENDATIONS: PROSUMER CAMCORDERS

Canon MVX25i
There's virtually nothing to fault the MVX25i, with its 1/1.4-inch CCD, great colour fidelity, and stacks of manual controls

Canon XL2
Quite simply the best indie-film DV camera on the market – even if it's starting to show its age. Has the best component system on offer

Panasonic NVGS200B
With a three-CCD imaging system, the NVGS200B offers superior colour fidelity, a proper focus ring, and good audio and accessory options

Sony DCR-PC109E
This upright palmcorder's touch-screen is unique, and makes the unit really easy to use. The output is great, with vibrant colours and good detail

Buying advice: digital cameras

If you want a digital camera for serious design and publication work, you'll probably reach for a digital SLR first. These cameras are built for professional photography. With a digital SLR model, you're sure of high-quality output, the lenses are interchangeable, and the cameras can communicate with proper flash lighting systems. Digital SLRs are now starting to fall in price, too, so they're becoming an affordable solution to your imaging problems.

However, a few of the top 'prosumer' compact cameras offer similar capabilities, so it's worth checking out your options.

The race to pack in higher megapixel output seems never-ending – the current crop of compact models have eight million pixels. However, higher resolutions can decrease output quality, because cramming more sensor cells onto small CCD sensors increases image noise. However, there are signs that suggest manufacturers realize high megapixel output only gives their products a temporary competitive advantage, and we're seeing some genuinely useful innovations too.

For instance, some manufacturers are addressing one of the biggest limitations of digital sensors – the dynamic range. This is the ability to capture detail in both bright highlights and deep shadows in the same exposure.

HP and Fujifilm have both come up with technologies that attempt to improve dynamic range. HP's Adaptive Lighting features on its Photosmart 945 model. When a photograph is taken, the camera calculates a contrast mask, and electronically balances the range of tones.

Fujifilm's method involves two photodiode sensors in each cell area of its Super CCD HR sensor. The two photodiode sensors have different light sensitivities, and the camera chooses which one to use for different areas of the image.

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating
Voyager XT	£977	Evesham, www.evesham.com, 0870 160 9700	Windows	Apr 05	**3.5**
A very average creative laptop. Specs look good on paper and it's priced reasonably. However, some of the components aren't good quality					
X6i-64	£2,499	Xworks, www.xworksinteractive.com, 01785 229 191	Windows	Digit 88	**3.0**
This 3D workstation uses a 3.73GHz P4 EE chip – fast, but not as fast as a dual system. Includes 4GB of RAM and the ATI FireGL v7100 graphics card					

Digital cameras

Camedia 7070 Wide Zoom	£315	Olympus, www.olympus.co.uk, 0800 072 0070	M | W	Aug 05	**4.5**
Top-quality compact digital camera with tough metal body, wide-angle lens, full manual and auto controls, and an excellent flip-up rotating monitor					
Coolpix 8400	£553	Nikon, www.nikon.co.uk, 0800 230 220	M | W	Jun 05	**4.5**
This 8mp digital camera has the widest angle of any compact camera – equivalent to 24-85mm. Sensor starts to get noisy at ISO 200 or 400					
Coolpix 8800	£595	Nikon, www.nikon.co.uk, 0800 230 220	M | W	Jun 05	**4.5**
The 8mp 8800 boasts a massive 10x zoom lens, and a clever Vibration Reduction (VR) technology to iron out shakiness. Good image quality and value					
Coolpix S1	£212	Nikon, www.nikon.co.uk, 0800 8541 4440	M | W	Aug 05	**3.5**
This is an incredibly slim pocket-sized camera. It's stylish and well built, but its tiny size can make it awkward to hold and shoot with					
Cyber-shot H1	£340	Sony, www.sony.co.uk, 08705 111 999	M | W	Aug 05	**4.5**
This 5mp digital compact camera boasts solid build quality, 12x zoom, Steady Shot image stabilization, and an impressive feature set					
Cyber-shot T7	£297	Sony, www.sony.co.uk, 08705 111 999	M | W	Aug 05	**4.0**
This camera is remarkably slim – just 16mm. Its build quality is also top notch, as is the image quality, but its tiny size makes it harder to use					
D2H	£2,130	Nikon, www.nikon.co.uk, 0845 4500 155	M | W	Jan 05	**5.0**
Nikon's second-generation professional digital SLR is a fantastic camera, despite its relatively low resolution of 4mp. Great quality images					
D50	£470	Nikon, www.nikon.co.uk, 0845 4500 155	M | W	Aug 05	**4.0**
Lowering the entry price of digital SLR photography still further, Nikon's D50 offers great manual and auto control, but suffers a few handling quirks					
D70	£680	Nikon, www.nikon.co.uk, 0845 4500 155	M | W	Jan 05	**4.5**
This is one of the first digital SLRs to move away from the professional market. It has consumer features like scene modes, plus pro fine-tuning options					
D70s	£595	Nikon, www.nikon.co.uk, 0845 4500 155	M | W	Aug 05	**4.0**
A makeover of the popular D70 digital SLR, the D70s is durable, and offers ultra-fast handling. However, it's pricey for a 6mp camera					
Digital Ixus 700	£235	Canon, www.canon.co.uk, 0800 616 417	M | W	Aug 05	**4.0**
Canon's pocket range of digital cameras is good-looking and high-quality, and the Ixus 700 is no exception. Pricey, though, and lacks manual controls					
Dynax 7D	£978	KonicaMinolta, www.konicaminolta.co.uk, 020 8751 6121	M | W	May 05	**3.5**
A 6mp digital SLR with good anti-shake technology, although it doesn't come with lenses that take advantage of this. Not as responsive as some rivals					
E-300	£595	Olympus, www.olympus.co.uk, 0800 072 0070	M | W	Feb 05	**4.0**
Digital SLR with 8mp and Four Thirds lens and flashgun compatibility. Great output for a good price, but the menu system is slightly fiddly					
EOS 20D	£925	Canon, www.canon.co.uk, 0800 616 417	M | W	Jan 05	**4.0**
This 8.2mp digital SLR offers fantastic image quality, great detail, a quick autofocus system, and a DIGIC II processor, all in a small and light body					
EOS-1D Mark II	£2,562	Canon, www.canon.co.uk, 0800 616 417	M | W	Jan 05	**4.5**
A digital SLR built for performance. Canon's DIGIC II processor, top notch exposure and autofocus technology, and 8.2 megapixels					
EOS-1Ds Mark II	£4,510	Canon, www.canon.co.uk, 0800 616 417	M | W	Apr 05	**4.5**
This 16.7mp digital SLR is aimed at professional studio and location use. Massive resolution means minimal interpolation, even at large print sizes					
EOS-350D	£553	Canon, www.canon.co.uk, 0800 616 417	M | W	Jul 05	**4.5**
Small, light, and fast handling, the EOS 350D is a bargain-priced digital SLR that boasts 8mp, great build quality, and brilliant usabilty					
Exilim EX-S500	£255	Casio, www.casio.co.uk, 020 8208 7838	M | W	Oct 05	**3.0**
This 5.1mp compact camera is ludicrously slim – and suffers ergonomically as a result. The images it produces aren't much cop, either					
Caplio GX8	£255	Ricoh, www.ricohpmmc.com, 020 8261 4000	M | W	Jul 05	**3.0**
Capable of capturing very fine detail, Ricoh's GX8 is an 8.2mp compact that offers great value and a decent level of manual control. Poor scene modes					
Caplio R2	£195	Ricoh, www.ricohpmmc.com, 020 8261 4000	M | W	Aug 05	**3.5**
This decent pocket-sized camera is neatly styled and boasts a versatile zoom lens. It's let down by a lack of any real manual controls					
FinePix F810	£298	Fujifilm, www.fujifilm.co.uk, 020 7586 5900	M | W	Mar 05	**4.0**
An update to the FinePix F710, the main difference is the F810's 7.3mp resolution – twice that of the old model. A decent, well-built compact					
FinePix F10	£220	Fujifilm, www.fujifilm.co.uk, 020 7586 5900	M | W	Aug 05	**4.5**
This pocket-sized camera has a 6.3mp CCD, a great 2.5-inch monitor, and the ability to shoot high dynamic range images. This camera oozes quality					
FinePix E550	£281	Fujifilm, www.fujifilm.co.uk, 020 7586 5900	M | W	Mar 05	**3.5**
Compact camera with 6.3mp resolution, 4x zoom, and a 2-inch screen. Unless you use RAW capture, it's prone to purple fringing at ISO 100					
FinePix S3 Pro	£1,360	Fujifilm, www.fujifilm.co.uk, 020 7586 5900	M | W	May 05	**4.0**
Mid-range Nikon-compatible digital SLR camera with innovative and effective sensor that captures a wide tonal range. Pricey, and a bit slow, though					
FinePix S5500	£299	Fujifilm, www.fujifilm.co.uk, 020 7586 5900	M | W	Mar 05	**3.5**
It looks-&-feels like a digital SLR, but isn't. Boasts 4mp resolution, a massive 10x zoom, and good output, but suffers from a small screen					
***ist DS**	£535	Pentax, www.pentax.co.uk, 01753 792 792	M | W	Jan 05	**4.0**
Small, lightweight, and affordable digital SLR with a decent feature set. Not enough dedicated control buttons, and pattern metering is easily fooled					

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating
Lumix DMC-FZ5	£297	Panasonic, www.panasonic.co.uk, 08705 357 357	M | W	Aug 05	3.5
This 5mp digital camera has a lot going for it – such as a fast and powerful zoom lens, and a good feature set – but its body feels a bit flimsy					
Mju-mini Digital S	£230	Olympus, www.olympus.co.uk, 0800 072 0070	M | W	Aug 05	3.0
This curvy camera comes in a variety of colours, but the performance is average. The 2:1 zoom and maximum aperture or f/3.5 are a bit limited					
Optio 750Z	£425	Pentax, www.pentax.co.uk, 01753 792 792	M | W	Aug 05	5.0
Fantastic retro styling, manual exposure controls, and reliably built, the Optio 750Z shoots RAW as well as JPG, and is a fine, pocketable camera					
Photosmart R717	£144	HP, www.hp.com/uk, 01344 360 000	M | W	Aug 05	4.0
This pocket camera from HP boasts a 6.2mp output, and a built-in red-eye remover so you can correct your images and print them without a PC					
PowerShot S2 IS	£235	Canon, www.canon.co.uk, 0800 616 417	M | W	Oct 05	4.5
5mp compact that offers a big zoom, great optical image stabilization, and an extensive set of features. Takes rechargable batteries, which is a pain					
R-D1	£1,072	Epson, www.epsonrd1.co.uk, 08702 416 900	M | W	Apr 05	3.5
This 6mp digital camera offers classic analog handling, with life-size finder. Large digital SLR-style sensor provides low noise. Menu system is poor					
SD10	£936	Sigma, www.sigma-imaging-uk.com, 01707 329 999	M | W	Jan 05	3.0
Improved version of low-cost digital SLR produces extremely sharp images despite low resolution. Unusual Sigma-only lens mount is only drawback					

Digital video cameras

GY-HD100E	£3,750	JVC, www.jvcproeurope.com, 020 8896 6000	M | W	Sep 05	4.5
The first HDV camera to feature interchangable lenses, and works with 720p resolution. Excellent output quality of footage impressed					
GY-DV5000E	£2,900	JVC, www.jvcpro.co.uk, 020 8896 6000	M | W	Dec 04	4.0
This stalwart of the scene is intuitive for those used to conventional broadcast cameras, offering good manual control and excellent auto					
HDR-FX1E	£2,150	Sony, www.sony.co.uk, 08705 111 999	M | W	Mar 05	3.5
This HDV camcorder offers exceptional output quality at 1080i resolution, but it suffers because it doesn't have XLR audio inputs					
NVGS400	£900	Panasonic, www.panasonic.co.uk, 0870 906 8357	M | W	Dec 04	4.0
The NGS400 isn't a true professional-level DV camera, but it does offer some pro applications. Three CCDs, and clean footage with accurate colours					
PDX10P	£1,400	Sony, www.sonybiz.net, 0870 6060 456	M | W	Dec 04	4.0
This is Sony's attempt to combine the best from the pro and consumer worlds and it works well. Top of its class in compact and mobile DV cams					
XL2	£3,000	Canon, www.canon.co.uk, 08705 143 723	M | W	Dec 04	4.5
Digit's Best Buy and the best indie-film DV camera in the market. It's £500 more than the DVX100A but is a better component-based system					

Input devices

Cintiq 21UX	£1,899	Wacom, wacom-europe.com @ CU, 020 8358 5857	M | W	Jun 05	4.5
This LCD graphics tablet is an amazing tool, with a massive screen, programmable Express Keys and styling that would turn any creative's head					
Intuos3	from £129	Wacom, wacom-europe.com @ CU, 020 8358 5857	M | W	Dec 04	4.0
A smart new design and an improved pen make the Intuos3 a great graphics tablet. The mouse is a bit unbalanced, but overall a decent buy					
SpaceBall	from £375	3Dconnexion, www.3dconnexion.com, 01952 243 629	Windows	Sep 04	3.5
Two-handed input devices that potentially prevent RSI, but they're unlikely to change the way you work, as there's no real benefit in terms of speed					

Storage devices

Bravo Pro DVD	£2,325	Primera, www.primera.com @ Bannerbridge 0870 870 1220	M | W	Aug 05	3.5
This DVD duplicator and printer offers fast and efficient disc-creation, but its print quality isn't high enough, and the Mac software is fiddly					
GigaVu Pro	from £365	Jobo, www.jobo.com, 01628 674 411	M | W	May 05	4.5
Portable storage device that lets you view pictures on the move. Boasts decent battery life, and supports a range of CCD-RAW files. No car adaptor					
ND3540A	£29	NEC, www.nec.co.uk, 020 8752 3665	M | W	Jul 05	4.5
A real-bargain of an internal DVD writer. It pushes vastly more expensive drives for speed, and offers reliable and simple DVD burning					

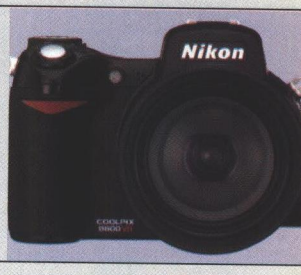
Monitors

321 LCD Monitor	£957	LaCie, www.lacie.com/uk, 020 7872 8000	M | W	May 05	4.5
Aimed at designers who would normally plump for a CRT, this LCD offers fantastic colour accuracy, and looks great on your desktop					
Cinema Display	£595	Apple, www.apple.com/uk, 0800 783 4846	M | W	May 05	3.5
The emergence of other LCDs for designers makes the Apple Cinema Display less impressive. Still looks great though, and still a good performer					
Cinema Display HD	£1,060	Apple, www.apple.com/uk, 0800 783 4846	M | W	May 05	4.0
The 23-inch version of the 20-inch Cinema Display, the HD offers much better value for money. Colour accuracy and styling are great					
ColorEdge CG21	£1,279	Eizo, www.eizo.co.uk, 01483 719 500	M | W	Digit 76	4.5
It's been overtaken by Barco's Coloris Calibrator for the best LCD crown, but this 21.3-inch model is far more realistically priced					
ColorEdge CG220	£3,189	Eizo, www.eizo.co.uk, 01483 719 500	M | W	May 05	4.0
The best handling of colour available on an LCD monitor. Good ergonomics and great output quality, but there's an inevitably massive price-tag					

DIGIT BEST BUY RECOMMENDATIONS: CAMERAS AND DV

RECOMMENDED:
Coolpix 8800

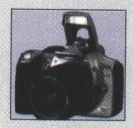
This 8mp digital compact camera is a class act, with a massive zoom lens and a clever anti-shake technology called Vibration Reduction (VR) that prevents your long-zoom images blurring



SLR CAMERAS

Canon EOS-1D Mark II
Based on Canon's top professional film camera, the EOS-1, this digital SLR is built for the ultimate performance

Canon EOS-1Ds Mark II
This 16.7mp digital SLR is perfect for the studio-based professional photographer, and allows use of Canon's wide-angle EF lenses



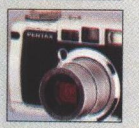
Canon EOS-350D
A superbly priced, well-built digital SLR camera. Delivers cracking results with bags of detail, and is an absolute joy to use

Nikon D70
The D70 is a great value digital SLR that packs in some excellent professional-level features. Thankfully, the images look great too

Nikon D2H
An updated D1H, this offers improvements to the imaging technology and is incredibly quick. Excels out in the field

POCKET-SIZED DIGITAL CAMERAS

Fujifilm FinePix F10
Fantastic image quality and a superb build make this camera a great buy. Shoots high dynamic range images, and boasts a 6.3mp sensor



Pentax Optio 750Z
Everything you could want from a pocket-sized camera. Stand-out features include true manual exposure controls and a flip-out monitor

RECOMMENDED:
JVC GY-HD100E

The JVC GY-HD100E scores well for it being the first HDV camera with interchangable lenses. The output at 720p proved impressive in our tests

DIGIT BEST BUY RECOMMENDATIONS: MONITORS

Dell UltraSharp 2005FPW
This 20-inch widescreen LCD display continues Dell's tradition of making budget monitors that satisfy the creative pro's needs

Eizo ColorEdge CG21
The best LCD package available. Pefect colour accuracy makes the CG21 a great buy for any designer – despite the comparatively high price

LaCie 321 LCD Monitor
This LCD offers great colour even before calibration – and it's spot on afterwards. Aimed at designers who are looking to replace old CRT monitors

NEC SprectraView 2180
A large colour gamut, fantastic colour output even before calibration, and a stylish look make the SprectraView 2180 ideal for any designer

Buying advice: monitors

The first decision you'll need to make is whether to get a flat-panel display, based on liquid crystal display (LCD) technology, or a cathode-ray tube (CRT) monitor.

An LCD display's advantage is unparalleled sharpness and an ultra-thin profile. In recent years, the quality of LCDs has improved to the point where they are suitable for all but very high-end graphics work.

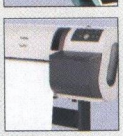
A screen hooked up to a digital DVI or ADC connector offers sharper, clearer images than those connected via an analog VGA connector.

The resolution of a monitor is expressed in horizontal and vertical pixel dimensions. The higher the resolution, the more you will be able to see on screen. The more inches, the larger the pixels. A CRT's dot pitch measures how close adjacent phosphor dots (or stripes on aperture-grille CRTs) are to each other. In general, the smaller the dot pitch, the sharper the display will be.

On CRT monitors, a low refresh rate – how many times your computer sends a fresh copy of the screen image to your display – implies flicker, a major cause of eyestrain. LCDs don't suffer from flicker at all.

DIGIT BEST BUY RECOMMENDATIONS: PRINTERS

HP DesignJet 30
While this is HP's idea of entry-level, the range of features and quality of the output, mean design professional's needn't look elsewhere



Canon Imageprograf W6400
You'll need a word with the bank manager, but if your budget stretches, the W6400 is a serious printer able to handle a range of output

Stylus Pro 4800
This heavy-duty A2 professional inkjet features dedicated grey inks for monochrome, as well as excellent colour output. Recommended

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating
Electron22blue IV	£549	LaCie, www.lacie.com/uk, 020 7872 8000	M | W	Apr 04	4.5
The Electron22blue boasts excellent picture quality, and offers great value for money. You won't get a better monitor without really splashing out					
Flatron L1940P	£314	LG, www.lge.com, 0870 607 5544	M | W	Jun 05	3.5
Despite the stylish looks, the 19-inch Flatron L1940P is a good monitor, but not really cut out for top-end creative work. Low resolution lets it down					
Gallery Xtreme 2010	£515	Formac, www.formac.co.uk, 08705 357 357	M | W	May 05	3.0
It the X-black technology pioneered by Sony for its laptops, but this large monitor suffers as a result. Too much glare, and too small a colour gamut					
Photon20vision II	from £519	LaCie, www.lacie.com/uk, 020 7872 8000	M | W	May 05	3.5
This previously great LCD monitor has been overtaken by newer models. The aspect ratio will put off video-editors, and colour-handling could be better					
SDM-S204	£671	Sony, www.sony.co.uk, 0990 424 424	M | W	May 05	3.0
The SDM-S204 is quite old now, and is over-priced and under-featured as a result. Boasts a wide colour gamut, but not the accuracy to match					
SDM-P234	£1,380	Sony, www.sony.co.uk, 0990 424 424	M | W	May 05	3.0
This 23-inch LCD can't compete with the likes of Apple's Cinema Display HD. Whites are washed out even after calibration, and it's very pricey					
SpectraView 2180	£999	NEC Display Systems, www.nec-mitsubishi.com, 020 7202 6300	M | W	May 05	4.5
A fantastic LCD monitor that has good enough colour handling and gamuts to satisfy most designers. Calibrator is easily stored in a hatch on the hood					
SyncMaster SM243	£1,701	Samsung, www.samsung.co.uk, 0870 242 0303	M | W	Digit 76	4.5
A massive 24-inch LCD, the SyncMaster SM243 is remarkably compact considering its size. Picture quality is fine after calibration					
UltraSharp 2005FPW	£469	Dell, www.dell.com/uk, 0870 152 4699	M | W	May 05	4.5
The 2005FPW is a widescreen version of the 2001FP, and offers the same budget pricing and excellent image quality					
VP231b	£1,190	Viewsonic, www.viewsonic.com/uk, 01293 643 900	M | W	Jul 05	3.5
Viewsonic's first 23-inch widescreen monitor. Offers good picture quality, but its design is dull and it's much more expensive than Apple's 23-incher					

Printers

5550DN	£2,229	HP, www.hp.com/uk, 0845 270 4222	M | W	Jun 05	5.0
HP's clever design and all-round quality belies the low price. An A3+ model that would be perfect for any busy design studio or creative office					
AcuLaser C1100N	£399	Epson, www.epson.co.uk, 0800 220 546	M | W	Jun 05	3.5
Epson's entry-level A4 colour laser printer, the C1100N is excellent value for money. Not really cut out for constant A4 colour printing, though					
AcuLaser C8600PS	£3,495	Epson, www.epson.co.uk, 0800 220 546	M | W	Jun 05	3.5
This A3+ model from Epson is a four-pass printer, which explains the slow speeds in colour printing. Its standard 192MB RAM is a bit disappointing					
Bubble Jet i9950	£407	Canon, www.canon.co.uk, 01737 220 000	M | W	Sept 05	4.0
This A3+ photo printer has a PictBridge camera port at the front, and the ChromaPLUS eight-ink system, plus a USB 2.0 and FireWire interface					
Bubble Jet W2200	£1,495	Canon, www.canon.co.uk, 01737 220 000	M | W	Sep 05	3.5
Capable photo-printer that is aimed more as a proofer for design studios and print shops due to its A3+ output – just too expensive for what it offers					
C9500dn V2	£3,135	Oki, www.europe.oki.co.uk, 0800 917 6015	M | W	Jun 05	4.5
This A3+ printer uses LEDs rather than lasers but works pretty much the same as a standard laser printer. Awesome image quality and very versatile					
Designjet 130nr	£1,295	HP, www.hp.com/uk, 0845 270 4000	M | W	Sep 05	4.0
This A1 printer comes with built-in colour sensor and automatic print-head alignment, but lacks FireWire or USB 2.0. Output is excellent, though					
Designjet 30	£440	HP, www.hp.com/uk, 0845 270 4000	M | W	Sep 05	4.5
The Designjet 30 is HP's entry-level wide-format printer for imaging professionals – and the price makes it attractive for a wide range of users					
Designjet 90r	£865	HP, www.hp.com/uk, 0845 270 4000	M | W	Sep 05	4.0
Despite being marketed as a proofer for design studios, the 90r makes a decent photographic printer as well, and B&W images are spot on					
HL-3450CN	£2,249	Brother, www.brother.com, 0845 6060 626	M | W	Jun 05	3.5
A small, light A3 printer, but it's also quite slow. Well made and easy-to-use, though there's no installer for Mac OS X, which seems a bit daft					
Imageprograf W6400	£2,499	Canon, www.canon.co.uk, 01737 220 000	M | W	Sep 05	4.5
Canon's new Imageprograf W6400 provides a comprehensive printing solution – from A4 cut sheets up to 24-inch-wide prints. Print quality is very high					
Magicolor 5450DL	£1,169	Konica Minolta, www.konicaminoltaprinters.co.uk, 01784 442 255	M | W	Jun 05	4.5
This compact A4 colour laser printer has a powerful 667MHz processor at its core, and 256MB RAM as standard. A top-quality offering					
Magicolor 7300	£2,495	Konica Minolta, www.konicaminoltaprinters.co.uk, 01784 442 255	M | W	Jun 05	3.5
It's getting old now, but this A3+ laser printer is fast, considering its reasonable price. Konica Minolta's image-enhancement technologies work well					
P915	£80	Lexmark, www.lexmark.co.uk, 0870 44 0044	M | W	Feb 05	3.5
This A4 consumer-focused photo printer offers great print quality, and features such as support for four memory card formats make it a bargain					
Phaser 7750V/GX	£6,999	Xerox, xerox.co.uk, 0870 873 3873	M | W	Jun 05	4.0
A fast single-pass A3+ printer that can hit 35ppm in colour or mono. However, this level of performance doesn't come cheap					
PIXMA iP8500	£280	Canon, www.canon.co.uk, 08705 143 723	M | W	Feb 05	4.0
A strange shape, the PIXMA iP8500 is billed as a printer for pro photographers, but doesn't have any digital camera card slots. Fast, with good output					
Photosmart 8450gp	£275	HP, www.hp.com/uk, 0870 241 1485	M | W	Feb 05	4.5
Stylish printer for digital photographers, packed with features for the serious user. Supports five different digital camera cards, as well as PictBridge					

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating
Stylus Pro 2100	£387	Epson, www.epson.co.uk, 0800 220 546	M | W	Feb 05	4.0
An A3+ alternative to Epson's R800. A seven-ink system allows you to swap between matte black and photo black cartridges as required					
Stylus Pro 4800	£1,498	Epson, www.epson.co.uk, 0800 220 546	M | W	Aug 05	4.5
Heavy-duty A2 professional inkjet with excellent colour and new dedicated grey inks for monochrome. Borderless printing with choice of resolutions					
Stylus Photo R1800	£339	Epson, www.epson.co.uk, 0800 220 546	M | W	May 05	4.5
This A3 inkjet printer excels at photo prints on a variety of media. Slower than standard inkjets on standard jobs, but great for photographers					
Stylus Photo R2400	£510	Epson, www.epson.co.uk, 0800 220 546	M | W	Aug 05	4.0
Affordable desktop A3+ printer with new K3 long-life pigment inks. RPM technology gives the printer a resolution on 5,760-x-1,440dpi					
Stylus Photo R800	$399	Epson, www.epson.co.uk, 0800 220 546	M | W	Feb 05	4.0
The highest-quality photo inkjet printer on the market, the R800 produces accurate photos, though it's slow and can't print borderless on the Mac					

Scanners

ArtixScan 120tf	£1,3690	Microtek, microtekeurope.com, 0870 906 3300	M | W	Jun 05	3.0
The best film scanner Microtek has to offer, which isn't saying very much, since this model is old. Correction system isn't as good as Digital ICE					
Canon CanoScan 9950F	£288	Canon, www.canon.co.uk, 01737 220 000	M | W	Oct 05	4.5
A4 flatbed scanner with 4,800-x-9,600dpi resolution and a top Super Toric aspherical lens for high optical quality and greater light transmission					
Dimage Scan Elite 5400 II	£509	Konica-Minolta, www.konicaminolta.co.uk, 01908 200 400	M | W	Jul 05	4.0
This 35mm film scanner captures well on its automatic settings, and has good dust and scratch removal. However, is software is poor and it's slow					
Dimage Scan Multi Pro	£1,960	Konica-Minolta, www.minolta.co.uk, 01908 200 400	M | W	Mar 05	3.5
This shoebox-sized film scanner is the medium-format equivalent of the Dimage Scan Elite 5400. Suffers the same drawbacks, but does have digital ICE					
Expression 10000XL	£1,999	Epson, www.epson.co.uk, 0800 220 546	M | W	Oct 05	4.0
A3 desktop scanner with 2,400-x-4,800dpi resolution. It's good for digitizing old prints, but its slower speeds and high price makes it second choice					
F-3200	£465	Epson, www.epson.co.uk, 0800 220 546	M | W	Mar 05	3.5
This unusual film scanner also scans reflective media, and can scan eight 35mm slides at once. Lack of corrective hardware limits its usefulness					
FilmScan 3600 Silver	£297	Microtek, microtekeurope.com, 0870 906 3300	M | W	Mar 05	2.0
A prime example of why you shouldn't buy a low-cost film scanner. Only 12-bit per colour capture gives dull and muted colours					
Perfection 4490 Photo	£169	Epson, www.epson.co.uk, 0800 220 546	M | W	Oct 05	4.0
A low-cost A4 desktop scanner with Digital ICE image-correction technology. Image quality is excellent, and it comes with a good software bundle					
Scanjet 4890	£70	HP, www.hp.com/uk, 0870 547 4747	M | W	Oct 05	3.0
This A4 desktop scanner is more suited to the family and enthusiast market. It's well built, though, and the specifications aren't to be sniffed at					
ScanMaker 1000XL	£1,701	Microtek, microtekeurope.com, 0870 906 3304	M | W	Oct 05	4.5
With 3,200-x-6,400dpi resolution, 4.0D range, and Digital ICE for prints, this A3 desktop scanner is a great buy for the creative studio					
ScanMaker i700	£179	Microtek, microtekeurope.com, 0870 906 3304	M | W	Oct 05	3.5
High-resolution A4 flatbed film scanner with Digital ICE, and a decent feature and software set. An attractively priced all-rounder					
Super CoolScan 9000 ED	£2,000	Nikon, www.nikon.co.uk, 0800 230 220	M | W	Feb 05	4.0
Versatile hi-res film scanner with Digital ICE4. Can handle all formats from miniature to 6-x-7cm. Only 35mm and 120/220 film holders are supplied					

Graphics cards

FireGL X3-256	£699	ATI, www.ati.com. 01844 263 747, ati@manandmachine.co.uk	Windows	Nov 04	4.0
ATI's highest-spec AGP graphics accelerator has a massive 7cm fan that gives a lot of cooling power. It's pricey, though					
FireGL V3200	£249	ATI, www.ati.com, 01844 263 747, ati@manandmachine.co.uk	Windows	Nov 04	3.5
This 128MB PCI-based card is a decent card at a good price. It performs in the mid-range on Maya and Max, but is a winner for Cinema 4D					
FireGL V5100	£499	ATI, www.ati.com, 01844 263 747, ati@manandmachine.co.uk	Windows	Nov 04	4.0
ATI's decent value 256MB PCI Express card offers 22.4GBps memory bandwith, has the same massive fan as the X3-256 but doesn't need extra power					
Parhelia 256MB	£365	Matrox, www.matrox.com, 01753 665 544	Windows	Nov 04	3.0
The Parhelia 256MB is small, and needs no exernal power. It supports three monitors at once so it's good for VJing or video production. Costly					
PNY NVidia FX 1100	£645	NVidia, www.nvidia.com, 01784 224 220	Windows	Nov 04	4.0
Good performance but with 128MB memory and a £650 price tag you would expect more from it. Outclassed by the Realizm 100					
PNY NVidia FX 1300	£535	NVidia, www.nvidia.com, 01784 224 220	Windows	Nov 04	4.5
A Digit Best Buy, this PCI-Express card is small, solid, and well-priced. With 128MB of DDR RAM, it's good enough for most situations in 3D applications					
PNY NVidia FX 3400	£929	NVidia, www.nvidia.com, 01784 224 220	Windows	Nov 04	3.0
At an earth-shattering price performance should have been better overall. The FX 1300 offers much better value for performance					
Realizm 100	£683	3Dlabs, www.3dlabs.com, 01784 470 555	Windows	Nov 04	4.5
Very good value. One of the most capacious cards on test and a Best Buy. 8xAGP support; 256MB memory; two DVI outputs; two display outputs					
Realizm 200	£874	3Dlabs, www.3dlabs.com, 01784 470 555	Windows	Nov 04	4.0
If you need to visualize scenes with a lot of textures, this is ideal. 8xAGP support; 512MB memory; two DVI outputs; two display outputs					

RECOMMENDED:
HP PhotoSmart 8450gp
A stylish printer for the digital photographer. Can download pictures direct from your camera, or a variety of memory card formats, and offers first-rate picture quality

Tech notes: film scanners

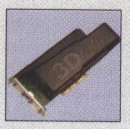
Despite the surge in digital photography, film isn't dead, and most professional photographers will have masses of film archived whether they've gone digital or not. So, scanning film is a regular task. The main problem when choosing a film scanner is the fact that the market is in decline – and the emergence of digital photography has made a dent in the demand for film scanners. Decent flatbed scanners have invaded the film scanner's market too, and there's little incentive for manufacturers to keep their film models up to date.

Desktop film scanners generally come in two forms: 35mm and medium format. 35mm film scanners can capture 35mm slides and filmstrips, with the ability to scan just a single slide at a time or a holder of four or five. Some medium format film scanners can work with film up to 6-x-9cm, some with up to 5-x-4-inch – and most come with holders for around four 35mm slides.

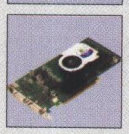
In the past, the most important specification for a scanner was the optical resolution. Now, though, even the lowest-resolution film scanner can produce images large enough to print A4 size or bigger at 300dpi.

Most scanners can capture 16-bit colour, but the most important figure is the dynamic range. This gives an indication of the level of shadow and highlight detail the scanner can reproduce. Many film scanners offer hardware-based automated correction tools. Kodak's Digital ICE is the best known, but some manufacturers have invented their own proprietry systems.

DIGIT BEST BUY RECOMMENDATIONS: GRAPHICS CARDS



3Dlabs Realizm 100
This is a great value card. It boasts two display outputs, two DVI output, 256MB memory, and 8x max AGP support



PNY NVidia FX 1300
The PCI Express card is quick, solid, and good value. It boasts 128MB memory, two display outputs, and two DVI outputs

SPOTLIGHT: 3D MODELLING AND ANIMATION SOFTWARE

SOLUTIONS FOR £1,000-£5,000

Alias Maya 7

A comprehensive upgrade with wide-ranging improvements to just about every area of the application

Discreet 3DS Max 7

Version 7 incorporates Normal Bump Mapping, Subsurface Scattering, and the complete Character Studio 4 character-animation package

NewTek LightWave 3D 8

Version 8 sees numerous hard- and soft-body dynamics improvements, says NewTek, along with cloth and workflow enhancements

Softimage|XSI 4.0

A professional 3D tool with features tuned to match its price tag – revamped hair tools, particle dynamics, and nonlinear animation

X marks the spot

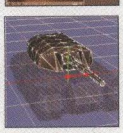
The Hive played on the fearsome reputations of the judges to create the title sequence for talent show The X Factor. The scene was modelled in Softimage|XSI

SPOTLIGHT: 3D MODELLING AND ANIMATION SOFTWARE

SOLUTIONS FOR UNDER £1,000

Curious Labs Poser 6

This latest incarnation of the character modelling and animation software is more complex, but more powerful too



Electric Rain Swift 3D 4

This 3D-to-Web software is versatile and easy to use. Version 4 sees a vastly improved polygon modelling environment and better gallery options

Eovia Carrara 4 Pro

A shallow learning curve and impressive feature set make Carrara 4 Pro a good addition to your creative toolbox

Kaydara MotionBuilder 6

A comprehensive tool that allows you import models from other applications and add real-time animation to them

Maxon Cinema 4D 9

One of the best 3D applications available, and ideal for learning the craft. Version 9 includes many improvements, including N-gon support

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating

3D and animation software

3D Software Object Modeller Pro £1,495 Creative Dimension, www.3dsom.com @ Freehand, 01483 200 111 Windows Oct 05 **4.0**
Simple to use method for capturing 3D objects from real-world originals. Merges multiple views. Problems with transparency and reflective surfaces

3DS Max 7 £2,695 Discreet, www.discreet.com, 01252 456 669 Windows Jan 05 **4.5**
Version 7 incorporates Character Studio 4, and features Normal Bump Mapping, Subsurface Scattering, and enhanced modelling and viewing tools

Bryce 5.5 £99.95 Daz Productions, www.daz3d.com, 001 800 267 5179 M | W Digit 88 **3.5**
The original landscape rendering program has come a long way, but still combines ease-of-use with considerable depth. OpenGL features are a bonus

Carrara 4 Pro £419 Eovia, www.eovia.com @ Computers Unlimited, 020 8200 8282 M | W Feb 05 **4.5**
Offers a wide range of features. Bones and IK animation are easy to use, and the suite boasts real-time terrain-creation and network rendering

Cinema 4D 9.5 £424 Maxon, www.cinema4d.co.uk, 0500 224 600 M | W Oct 05 **4.5**
This suite now boasts impressively improved rendering, and Ambient Occlusion. Global illumination needs updating, but otherwise a great product

Electric Image Animation Sys $895 Electric Image, www.eitechnologygroup.com, 001 830 438 4955 M | W Sep 05 **3.5**
While it offers high-quality rendering up to 32,000-pixels square, plus efficient materials control, the cluttered interface is off-putting

FaceFX 1.0 call company OC3 Entertainment, www.oc3ent.com, 001 919 460 4564 Windows Aug 05 **4.0**
A game-oriented facial animation application. It's a good system – workflow is slow, but that's the price you pay for the high level of control on offer

Hexagon £169 Eovia, www.eovia.com @ Computers Unlimited, 020 8200 8282 M | W Aug 05 **3.5**
3D modelling software that offers a good set of polygon tools, but the modelling history is temperamental and unreliable. A bit too glitchy

LifeStudio:Head Pro 2.6 £483 Lifemode Interactive, www.lifemi.com, 01932 847 597 M | W Aug 05 **4.5**
A very comprehensive facial animation and lip-syncing application. Offers lip-syncing with auto phoneme extraction, as well as face modelling

LightWave 3D 8 £945 NewTek, www.newtek.com, www.newtek-europe.com/uk M | W Oct 04 **4.0**
Version 8 of this 3D suite has new character animation tools including bone editing and rigging enhancements, plus an IK booster and loads more

LipSync 2.0 $250 DSP Engineering, www.speechanimation.com, 0039 0289 073 447 M | W Aug 05 **3.5**
Aimed at the higher-end of lip-syncing and animation. Its real-time analyzing of audio is impressive, but it doesn't have 3D models built in

Magpie Pro 2.1.2 $250 Third Wish Software, www.thirdwishsoftware.com M | W Aug 05 **3.5**
One of the more complete, general purpose lip-sync tools available. Generates both 3D and 2D animations, and supports plenty of different formats

Maya 7 from £1,449 Alias, alias.com, 01494 441 273 M | W | L Sep 05 **4.5**
Maya is the industry-standard high-end 3D effects and character-animation tool. Its workflow is creative and experimental, but hugely powerful

Mimic Pro 3 $195 Daz Productions, www.daz3d.com, 001 800 267 5170 M | W Aug 05 **3.5**
Comes either as a LightWave plug-in or as an application that works with Poser. Mimic is a fast and easy-to-use facial animations system

Poser 6 £145 E frontier @ Computers Unlimited, 020 8200 8282 M | W May 05 **4.5**
This version of the character modelling and animation software boasts powerful new rendering options and enhanced figure articulation

Realsoft 3D 5 €600 Realsoft, www.realsoft.com, 00358 3212 9913 Windows Mar 05 **3.5**
This 3D package will attract newcomers to 3D with its educational pricing plan, but it's Windows-only, and has a steep learning curve

Shade 7 £552 E frontier, www.e-frontier.com @ CU, 020 8200 8282 M | W Jan 05 **3.0**
Full function 3D modeller and renderer for a reasonable price. Integrates with Poser, ArchiCAD, Illustrator, and Photoshop. Not as easy to use as it looks

Softimage|XSI 4.0 from £299 Softimage, www.softimage.com, 01753 655 999 W | L Oct 04 **4.5**
Powerful 3D modelling and animation suite that boasts one of the best renderers available. Great workflow and interface makes this a top package

Swift 3D 3 plug-ins $297 Electric Rain, www.erain.com, 001 303 543 8233 Windows Jun 05 **4.0**
Offers 11 rendering options, SmartLayer technology, improved speed and transparency, and realistic shadows to the 3D and Web application

Toon Boom Studio 2.5 £239 Toon Boom, www.toonboom.com @ Pixelution, 01462 433 558 M | W Apr 05 **3.5**
2D animation software now adds auto lip-syncing and drawing in 3D scene planning view. Well-designed, but the display is a little clunky

Voice-o-matic £150 Di-o-matic, www.di-o-matic.com, 001 514 369 2400 Windows Aug 05 **4.5**
This lip-syncing plug-in for 3DS Max offers tight integration with the host program. It supports up to 40 phonemes, allowing accurate facial animation

Vue 5 Infinite £411 E-on Software, www.e-onsoftware.com, 0033 143 553 671 M | W Jun 05 **4.0**
This landscape-generation software offers new tools for rendering foliage and high-polygon scenery. Multipass rendering now comes as standard

Desktop publishing software

Acrobat 7.0 Professional £395 Adobe, www.adobe.co.uk, 020 8606 4001 M | W May 05 **4.5**
Update boasts extended print tools, improved preflighter, new Windows-only forms designer, and direct output from Internet Explorer

Canvas X $349 ACD, www.acdsystems.com, 001 250 544 6700 M | W Jul 05 **4.0**
Professional quality technical illustration and general design and layout program. Extensive toolkit allows you to do everything in the one application

InDesign CS 2 £609 Adobe, www.adobe.co.uk, 020 8606 4000 M | W Jul 05 **4.5**
Adobe has boosted efficiency by improving workflow and style use. You can even switch layers on and off in Photoshop and PDF documents

PrintDevizor 1.2 £495 StoneCube, www.stonecube.com @ Colour Confidence, 0800 0735 845 M | W Oct 05 **4.5**
This software renders 2D graphics files in 3D, allowing you to preview special inks in various lighting conditions. Solves a real problem in a unique way

QuarkXPress 6.5 £995 Quark, www.quark.co.uk, 00800 1787 8275 M | W Jul 05 **4.0**
Quark 6.5 is a significant free upgrade to the DTP stalwart. QuarkVista is a useful image XTension, but Quark's PDF output still lags behind InDesign's

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating
RagTime 5.6.5	£449	LanMarque, www.lanmarque.co.uk, 01932 222 821	M | W	Jul 05	3.5
RagTime has evolved from a straight DTP program into a low-cost but comprehensive business suite with the ability to import MS Office files					
Ready,Set,Go! 7.6.1	£100	Diwan Software, www.diwan.com, 020 7252 5333	M | W	Jul 05	4.0
A solid frame-based DTP application with a logical toolbox and smart menu systems. If you miss PageMaker, you'll find this an excellent alternative					

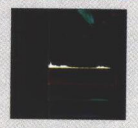
Digital video

3DEqualizer V3	from £1,990	Science D-Visions, www.3dequalizer.com @ Techimage, 01367 253 868	M | L | I	May 05	4.5
3DEqualizer is a hands-on motion-tracking tool, but still offers effective automatic options. Usable, stable, and robust, with great results					
After Effects 6.5	from £565	Adobe, www.adobe.co.uk, 020 8606 4001	M | W	Feb 05	4.5
The upgrade to version 6.5 adds an advanced clone tool, which saves a lot of time on boring jobs. Disk caching also speeds things up. Essential					
Boris Red 3GL	from £599	Boris FX, www.borisfxeurope.com, 01264 326 384	M | W	Feb 05	4.0
Runs as a compositing plug-in with almost any editing package, or as a standalone suite. The interface is cramped, but the results are great					
Boujou 3.0	$10,000	2d3, www.2d3.com, 01865 811 060	M | W | L	May 05	3.5
An immensely expensive matchmoving tool, Boujou 3.0 will nonetheless save you a massive amount of time. Automatic tracking with great results					
Boujou Bullet 1.0	£1,365	2d3, www.2d3.com @ Techex, 0870 161 7171	M | W | L	Apr 05	4.0
The interface of this matchmoving tool is a little glitchy, but Boujou Bullet offers a simple-to-use wizard, and offers fast and efficient matchmoving					
Combustion 4	£850	Autodesk, www.discreet.com, 020 7851 8000	M | W	Jun 05	4.0
The best visual-effects package for under £1,000, but After Effects still tops it for motion-graphics work. Few new features in the version 4 upgrade					
Continuum Complete 3.0	£459	Boris FX, www.borisfxeurope.com, 01264 326 384	M | W	Jun 05	4.0
A massive set of video plug-ins that runs with Final Cut Pro, Premiere Pro or After Effects. Expensive but worth it for professional users					
Edius Pro 3	£315	Canopus, www.canopus uk.com, 01189 210 510	Windows	Mar 05	3.5
Edius is gaining on its competition with every release but cutting-edge innovation doesn't excuse weak effects tools. It's more 'pro' than ever, though					
Final Cut Pro 5	£595	Apple, www.apple.com/uk, 0800 783 4846	Mac	Jul 05	4.5
Final Cut Pro has clawed its way to the top since its launch five years ago. New version adds support for new formats and multicam editing					
Magic Bullet Suite 2.0	£450	Red Giant Software @The CarPark, 02879 632 614	Mac	Jun 05	4.5
A set of plug-ins with a very wide appeal. Its preset Looks for digital video have image-based previews, which makes choosing the right look easy					
MatchMover Pro 3.1	£2,139	Realviz, www.realviz.com @ Computers Unlimited, 020 8200 8282	M | W | L	May 05	4.0
This professional 3D camera-tracking system is a capable and robust application, but can be buggy under Mac OS X and is pricey					
Mirage 1.2	€895	Bauhaus Software, bauhaussoftware.com, 001 210 212 7530	M | W	Feb 05	3.0
Combines video effects, motion graphics, rotoscoping, cel animation, and Painter-style natural media. Great for animators, not so great for compositors					
Motion 2	£169	Apple, www.apple.com/uk, 0800 783 4846	Mac	Jul 05	4.5
Apple's motion-graphics product provides real-time manipulation and rendering. Needs a top spec Mac, but Motion 2 is a real step up for the product					
Particular	$299	Trapcode, www.trapcode.com	M | W	Jun 05	4.5
A powerful particle solution that bridges the gap between compositing and full-on 3D in After Effects 6.0. Includes a real-time preview system					
PFHoe 1.0	from £49	The Pixel Farm, www.the pixelfarm.co.uk	M | W	Mar 05	4.5
This motion- tracking software brings high-end process within reach of beginners. Inexpensive and professional, with a user-friendly look-&-feel					
PFMatch 1.0	£600	The Pixel Farm, www.the pixelfarm.co.uk	M | W	May 05	4.0
Relatively affordable tracking solution for broadcast, auto-tracking with good post-tracking cleaning and refinement tools. The interface is a little glitchy					
RE:Flex	$795	RE:Vision FX, www.revisionfx.com	M | W	Jun 05	4.5
RE:Flex is an incredibly easy-to-use set of warping tools. Morphing is just as easy – and auto-align feature matches features of common morphs					
Shake 3.5	from £1,786	Apple, www.apple.com/uk, 0800 783 4846	M | W	Feb 05	3.5
An exceptional tool for post houses putting together top film and commercial work, but it's not the right software for everyday jobs					
Silhouette Roto 1.0	$495	Silhouette FX, www.silhouettefx.com	M | W | L	Jun 05	4.5
A streamlined, easy-to-use, and powerful dedicated roto-spline package that takes a lot of the drudgery out of rotoscoping work					

Graphic design software

Aurora 2.1	$179	Digital Element, www.digi-element.com	M | W	Oct 05	4.0
A Photoshop plug-in that is also a 3D landscape generator – creating seas and skies with stars and suns, faking complex lighting and particle effects					
Backdrop Designer	$199	Digital Anarchy, www.digitalanarchy.com	M | W	Oct 05	4.0
Backdrop Designer is a Photoshop plug-in that focuses on creating textures for photoshoots. However, rendering is very slow					
Eye Candy 5	$99	Alien Skin, www.alienskin.com, 001 919 832 4124	M | W	Oct 05	4.0
Photoshop plug-in collection that isn't the most artful, but what it does it does quickly and with a glossy sheen. Efficient and reliable					
Fluid Mask	£299	Vertus, www.vertustech.com, 0870 333 6901	Mac	Oct 05	4.0
Masking tool for Photoshop that uses 'heligon' technology, making it effective on difficult subjects – though it's tricky to use, and quite pricey					
FreeHand MX	£289	Macromedia, www.macromedia.com/uk, 01344 458 600	M | W	Jul 05	4.0
With its excellent MX Studio interface cleanup, great new tools, and a raft of improved features, this is the most compelling upgrade since version 7					

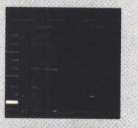
DIGIT BEST BUY RECOMMENDATIONS: DIGITAL VIDEO TOOLS



Adobe After Effects 6.5
A packed point-five upgrade to a great compositing application, After Effects 6.5 has more than 60 new effects, and an advanced clone tool

Apple Final Cut Pro 5
Apple has gradually improved this video-editing suite to the point where Final Cut Pro is one of the best in the business

Apple Motion 2
Apple's motion graphics offering makes the most of top Apple hardware. Version 2 boasts tight integration with Apple and Adobe creative products



GenArts Sapphire
The ultimate plug-in collection for video editors, Sapphire is aimed at high-end compositors whose work demands the highest quality

The Pixel Farm PFHoe 1.0
A powerful tool that lets beginners get to grips with complex motion-tracking facilities. Handles free motion and nodal pan camera moves

Red Giant Software Magic Bullet Suite
A great set of plug-ins for compositors, that works with After Effects 5.5 and Combustion 3. Great for using film styles for creative effect

RE:Vision FX RE:Flex
An easy-to-use and very effective warping and morphing plug-in for video-editing systems – RE:Flex puts native attempts to shame

Science D-Visions 3DEqualizer V3
This matchmoving solution is one of the most hands-on out there – there's no wizard here. The results though, are fantastic

Silhouette FX Silhouette Roto 1.0
Powerful rotoscoping software that's far and away the best in the business, and makes a tedious task a whole lot easier

Trapcode Particular
This plug-in supercedes After Effects' dated particle system – bridging the gap between compositing and full-on 3D work

Trouble sleeping
The latest offering from British animation duo the McLeod Brothers, Dog Tired is a dark, comic tale of sleep deprivation, created by animating photographs in 2D and 3D space. It was animated in Flash and After Effects

DIGIT BEST BUY RECOMMENDATIONS: GRAPHICS SOFTWARE

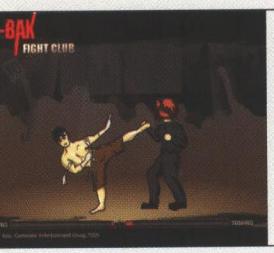
Adobe Illustrator CS 2
The Create Suite 2 upgrade doesn't have that many new features, but the addition of Live Trace and Live Paint is a revelation

FreeHand MX
With its excellent MX Studio interface cleanup, great new tools, and improved features, this is the most compelling upgrade since version 7

Painter IX
Painter IX offers a more Photoshop-like experience, and is all the better for it. There is no better natural-media painting program

Primatte Chromakey 2.0
This compositing plug-in for Photoshop removes plain backgrounds from photos, and handles the difficult cutouts like hair really well

pxl SmartScale
It has limits, especially with text and logos, but SmartScale soothes the headache of low-res imagery like nothing else. Highly recommended



Street fightin' man
Egovision created an old-school Streetfighter*-style beat-em-up for the Web site promoting the movie* Ong-Bak. *The game engine was developed in Flash, and took about three weeks to complete*

DIGIT BEST BUY RECOMMENDATIONS: UTILITIES

Enfocus Instant PDF 3.0
This preflighting software is worth shelling out for. Supports new versions of both major DTP packages, and minimizes expensive errors

Extensis Portfolio 7
A traditional asset-management program. Puts every digital asset at your fingertips, whatever you're working on

iView Multimedia iView Media Pro 2
Slick, speedy, and good-looking, iView Media Pro 2 is easy to use, and offers the added benefit of image editing within the application

Product name	Price	Company and contact details	Platform	Reviewed	Digit rating
Genuine Fractals 4.0	$99	onOne, www.ononesoftware.com, 001 503 968 1468	M | W	Oct 05	4.5
Photoshop plug-in that performs just one function – it increases the resolution of pictures. One of the most vital tools for the publishing industry					
Illustrator CS 2	£435	Adobe, www.adobe.co.uk, 020 8606 4000	M | W	Digit 88	4.5
Live Trace makes vectorizing bitmap images a breeze, and Live Paint makes creating complex artwork easier. The new Options bar tidies up the interface					
ModelShop	$149	Digital Element, www.digi-element.com	M | W	Oct 05	4.0
ModelShop is a Photoshop plug-in that allows you to import 3D models into your pictures. Supports a wide variety of formats					
Mystical Lighting	$179	Auto FX, www.autofx.com, 001 205 980 0056	M | W	Oct 05	4.0
Like an expanded version of Photoshop's own Lighting Effects filter. Allows you to apply all manner of lighting styles to your images					
Photography Pack	$50	Flaming Pear, www.flamingpear.com	M | W	Oct 05	4.0
A Photoshop plug-in collection that is comprised of three artistic effect filters and a wildly different water-modelling tool					
Photoshop CS 2	£445	Adobe, www.adobe.co.uk, 020 8606 4000	M | W	Digit 88	4.5
The best reason to buy Adobe's Creative Suite 2, Photoshop has been given some fantastic new special effects, as well as good efficiency improvements					
Power Retouche	£100	Power Retouche, www.powerretouch.com	M | W	Oct 05	4.5
A photo retouching plug-in for Photoshop, Power Retouche offers 20 filters. Some improve Photoshop's tools, others offer something different					
Primatte For Photoshop	$299	Digital Anarchy, www.digitalanarchy.com	M | W	Oct 05	4.5
Essentially a greenscreen (keying) plug-in for Photoshop. Shoot your subject in front of a high-contrast background and Primatte will cut it out					
Verdant 1.6	$179	Digital Element, www.digi-element.com	M | W	Oct 05	4.0
Verdant is a plug-in for Photoshop that creates 3D plants, including trees. It's preset-based, but there's plenty of options and you can buy more online					

Multimedia software

DVD Producer Authoring 5.0	£1,125	Sonic, www.sonic.com, 020 7437 1100	Windows	Apr 05	3.5
Sitting between high-end systems and desktop DVD authoring packages, DVD Producer Authoring is pricey for what you get					
DVD Studio Pro 4	£297	Apple, www.apple.com/uk, 0800 783 4846	Mac OS X	Jul 05	4.5
Apple has gone straight for the Hollywood market with DVD Studio Pro 4. Supports HD DVD, and is well intergrated with Motion and Final Cut Pro					
DVD Workshop 2	£153	Ulead Systems, www.ulead.co.uk, 0049 2131 512 6850	Windows	Apr 05	3.0
DVD authoring with a simple interface, and plenty of wizards to help you through the process. It's a bit basic, but worth considering					
Encore DVD 1.5	£121	Adobe, www.adobe.co.uk, 020 8606 4001	Windows	Apr 05	4.0
The upgrade to version 1.5 adds QuickTime support, background transcoding, a styles palette, After Effects integration, and some essential revisions					
Ikivo Animator	€295	Ikivo, www.ikivo.com, 0046 853 481 180	M | W	Sep 05	4.0
While expensive for what it does, its ability to convert SVG files into mobile-friendly SVG-tiny files is robust, and you can add interactivity as well					
Mediator Pro 8	£249	Matchware, www.matchware.com, 020 8940 9700	Windows	Jun 05	3.5
Mediator Pro is a simple but effective multimedia application. Boasts an integrated drawing application and FTP upload facility					
PanoWeaver 4.0	$599.95	EasyPano, www.easypano.com, 001 323 908 8588	Windows	Digit 88	4.5
Easy-to-use panorama creation software that doesn't charge you for each image you create – unlike some of its competitors. Now works with SLRs					

Web design software

Dreamweaver 8	£339	Macromedia, www.macromedia.com/uk, 01344 458 600	M | W	Oct 05	4.5
A major upgrade for Macromedia's Web design program, version 8 offers timesaving boosts, new CSS support, coding improvements and more					
Fireworks 8	£249	Macromedia, www.macromedia.com/uk, 01344 458 600	M | W	Oct 05	4.5
The revamp for this Web graphics software offers excellent export and import options, and a faster workflow with an easy-to-use interface					
Flash 8 Professional	£499	Macromedia, www.macromedia.com/uk, 01344 458 600	M | W	Oct 05	4.0
This upgrade to the Web and animation software boasts a much improved video codec, and new creative possibilty thanks to new filters					
GoLive CS 2	£335	Adobe, www.adobe.co.uk, 020 8606 4000	M | W	Jul 05	4.0
Adobe's Web design software has an improved CCS editor, and tight integration with the Creative Suite. It's just not as wide-ranging as Dreamweaver					
Xtivity 1.1	$399	Tivity Software, www.tivity.com, 001 205 980 7656	M | W	Sep 05	4.5
Requires zero coding to create full, interactive Flash sites and applications that are extremely complex – and astoundingly, it does it very well					

Utilities

Colorproof XF	from £735	EFI, www.efi.com, 020 8476 7676	M | W	Mar 05	4.0
Professional-quality proofing software to drive a wide range of colour printers, with accurate simulation of international print standards					
Instant PDF 3.0	€199	Enfocus, www.enfocus.com, 0032 9269 1690	M | W	Mar 05	4.5
Utility for detecting and correcting expensive mistakes before submitting PDFs. Now supports InDesign, QuarkXPress, Acrobat and OS X PDFs					
iView Media Pro 2	£101	iView Multimedia, iview-multimedia.com, 020 7223 8691	M | W	Digit 88	4.5
This dedicated media management tool looks great and handles graphics, movies, and audio files speedily and efficiently					
Portfolio 7	£130	Extensis, www.extensis.co.uk @ CU, 020 8200 8282	M | W	Digit 88	5.0
An improved interface and ease-of-use make this the ultimate media management tool. New NetPublisher allows you to create a Web portfolio					

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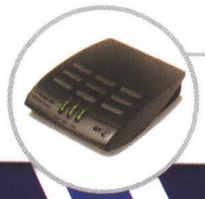
Office 2000	upto 2Mbps	20 : 1	£29.95 ex VAT	£69.99 ex VAT



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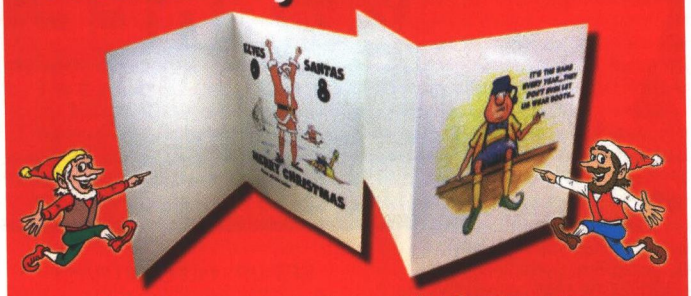

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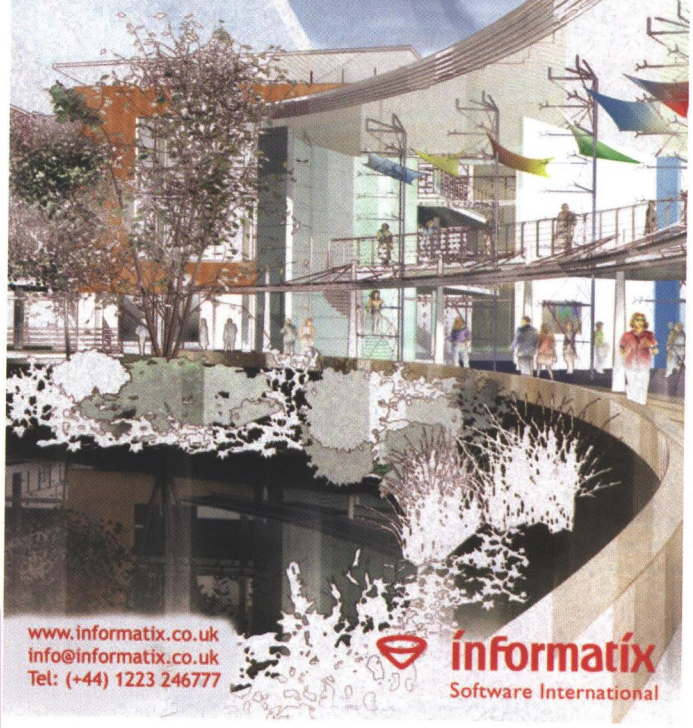

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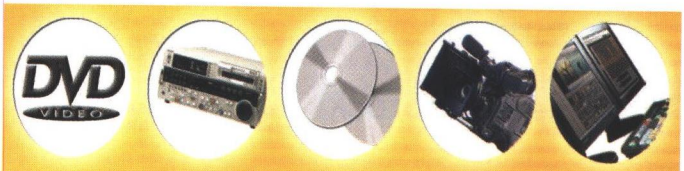

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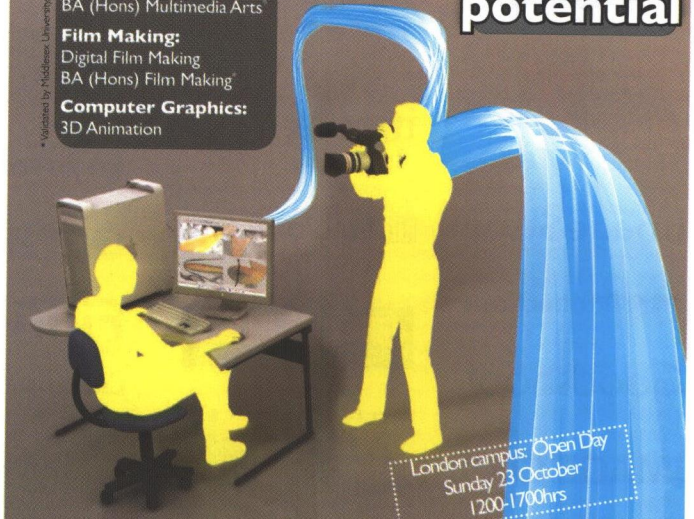

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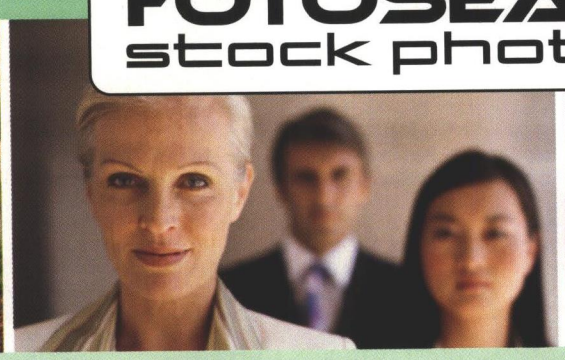

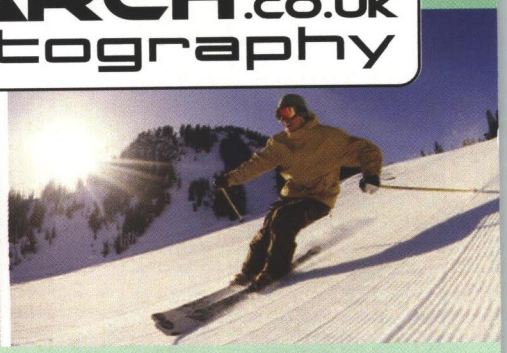

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Showcase & software

If you see this symbol in the issue, you'll find creative media such as behind-the-scenes videos or a demo of the software being reviewed on this issue's cover disc.

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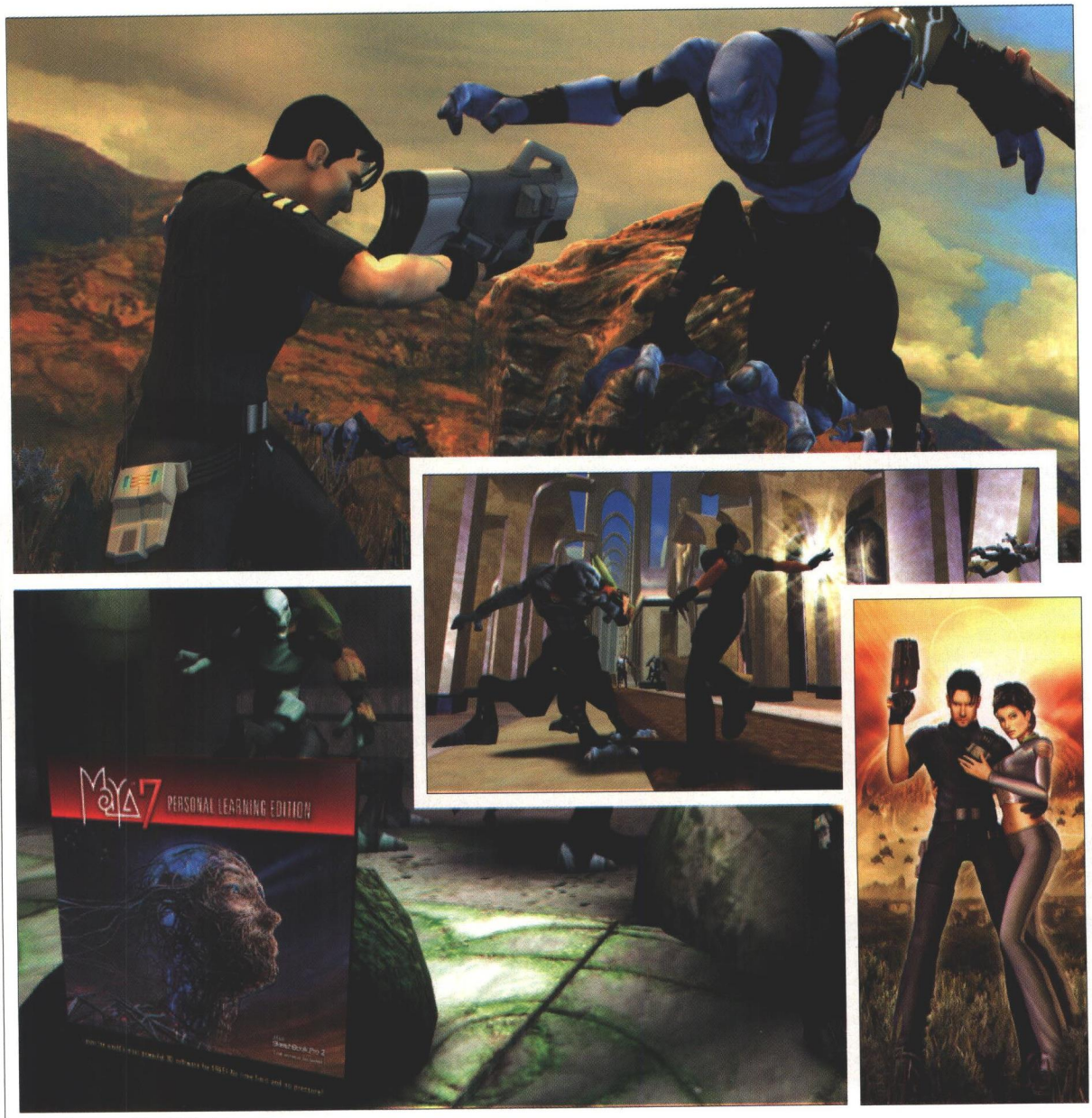

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Maya 7 Personal Learning Edition is a special version of Maya software, which provides free access to Maya for non-commercial use. It gives 3D graphics and animation students, industry pros, and those interested in breaking into the world of computer graphics (CG) an opportunity to explore all aspects of the award-winning Maya Complete software in a non-commercial capacity.

Almost every feature found in the full commercial version of Maya Complete 7 can be found in Maya 7 PLE, including new character rigging and animation technology with full body inverse kinematics (IK), the advanced Maya Trax non-linear animation editor, and full dynamics system including soft and rigid body dynamics. You also have access to a complete particle system, Maya Paint Effects, the Maya Artisan brush-based interface, Toon shading capabilities, and integration with Photoshop and Illustrator.

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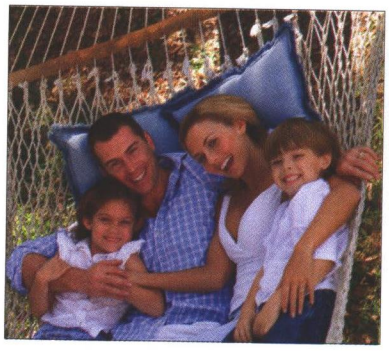
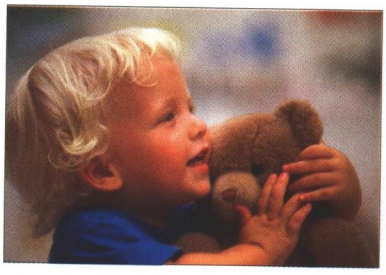
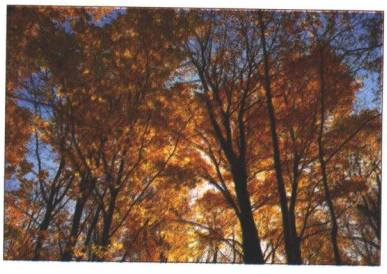






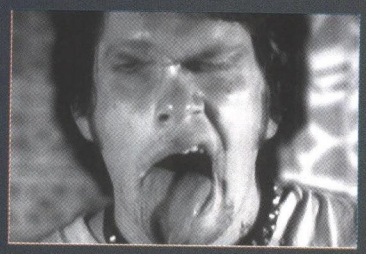
www.creatas.co.uk

This month, Creatas Images has given you six hi-res stock images based around the themes of 'family' and 'autumn together'.

The images are royalty-free and can be used in your commercial projects.

Creatas Images is the leading provider of stock resources to design professional all over the world. It has direct operations in the UK, Germany, France, Australia, and the US. Call Creatas on *0800 056 7533*, or alternatively visit the new Creatas 2.0 Web site at *www.creatas.co.uk*

CREATIVE SHOWCASE



DOG TIRED

The McLeod Brother's short film is a dark fairytale told using still photos. The CD features an extended clip from it.

GEEK BOY

onedotzero designed these stings for the Sci Fi Channel. To learn more on how they were created, turn to page 46.

GHOST IN THE SHELL

Check out the trailer, clips, and a viral game for *Ghost In The Shell: Standalone Complex*, an offshoot of the Manga film.

A GREAT BIG ROBOT...

Mark Shirra's short, *A Great Big Robot From Outer Space Ate My Homework*, created at the Vancouver Film School.

TRUSTED COMPUTING

Benjamin Stephan and Lutz Vogel have used every motion graphics trick in the book in their take on modern computing.

TUBE POKER

Tube Poker offers a fascinating look at the game that's sweeping the capital. The image above shows a Royal Flush.

MORE CONTENT

FontExplorerX

Mac OS X,
www.linotype.com

FontExplorer X sets a new standard for font management software within Mac OS X. Font management has never been so simple, and font sorting, font shopping and font discovery are now more fun than ever.

FontExplorer X gives computer users all the font functions they could need, and lets them decide how deeply they wish to dive into various font themes. Whether you want to use a folder structure, or integrate with Apple's Font Collections, you decide where your fonts will be placed, and how they will be sorted.

The Digit CD wants you!

Every month the Digit CD features our top showcase of the latest and best short films, showreels, music promos, and adverts. Think your work can measure up? If so, email us at showcase @digitmag.co.uk. Movies should be in QuickTime format using Sorenson compression, 480 pixels across and you must ensure that you have copyright for all media, including the soundtrack. Bring it on!

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SHOWCASE

onedotzero's *Geek Boy* idents for the Sci-Fi Channel

Clip from the McLeod Brothers' short film, *Dog Tired*

Ghost In The Shell: Standalone Complex trailers, clips and viral game

A Great Big Robot Ate My Homework short film

Tube Poker trailer

Trusted Computing short film

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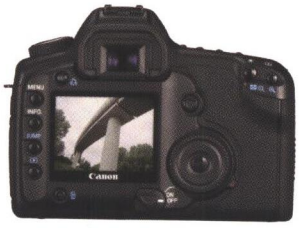

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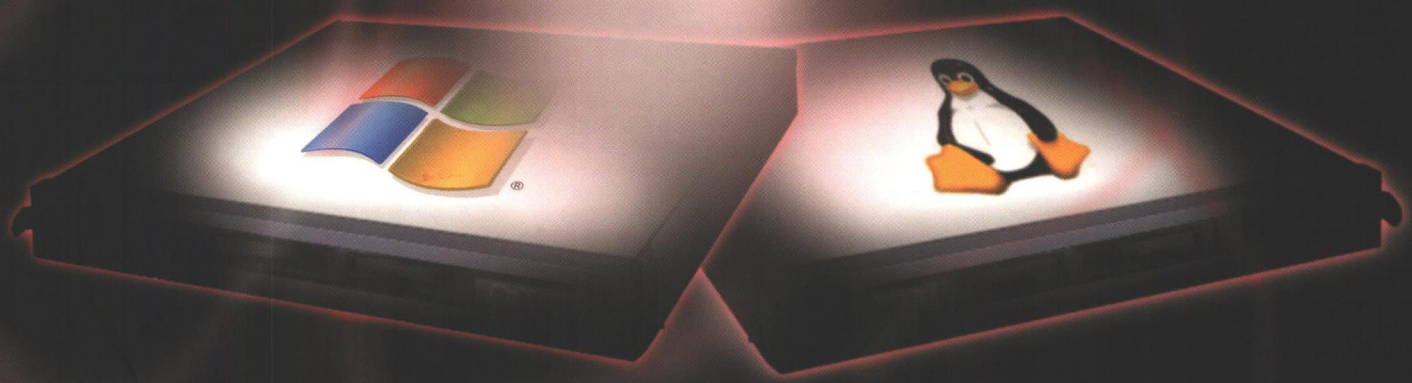

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